

Exhibit V

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5349392

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
EMPIRE TECHNOLOGY DEVELOPMENT LLC	12/28/2018

RECEIVING PARTY DATA

Name:	CRESTLINE DIRECT FINANCE, L.P.
Street Address:	201 MAIN STREET, SUITE 1900
City:	FORT WORTH
State/Country:	TEXAS
Postal Code:	76102

PROPERTY NUMBERS Total: 2822

Property Type	Number
Application Number:	09652011
Application Number:	12886370
Application Number:	12886403
Application Number:	13695276
Application Number:	13376544
Application Number:	13321784
Application Number:	13256215
Application Number:	13511134
Application Number:	15681281
Application Number:	13982251
Application Number:	13696689
Application Number:	13699193
Application Number:	13698776
Application Number:	14626591
Application Number:	13814866
Application Number:	13976440
Application Number:	13814844
Application Number:	13988010
Application Number:	14375115
Application Number:	13993908

PATENT**REEL: 048373 FRAME: 0217**

COBB_029308

505302614

Property Type	Number
Application Number:	13811548
Application Number:	13879289
Application Number:	14548223
Application Number:	14440923
Application Number:	14362907
Application Number:	13879800
Application Number:	13825052
Application Number:	13816574
Application Number:	14009763
Application Number:	14768217
Application Number:	14768218
Application Number:	15584363
Application Number:	15584518
Application Number:	14648460
Application Number:	14770580
Application Number:	13825858
Application Number:	14785566
Application Number:	14760740
Application Number:	14651841
Application Number:	13876016
Application Number:	14898420
Application Number:	15031710
Application Number:	14778977
Application Number:	14894616
Application Number:	14889713
Application Number:	13978109
Application Number:	15101394
Application Number:	14125929
Application Number:	14894814
Application Number:	14767188
Application Number:	15036308
Application Number:	14905729
Application Number:	14001764
Application Number:	14889780
Application Number:	14901696
Application Number:	14891752
Application Number:	14130956
Application Number:	14114738

Property Type	Number
Application Number:	14888564
Application Number:	14488910
Application Number:	14894660
Application Number:	15377666
Application Number:	15031188
Application Number:	15032040
Application Number:	14426161
Application Number:	14394408
Application Number:	15026070
Application Number:	15031713
Application Number:	15101396
Application Number:	15035371
Application Number:	14358708
Application Number:	14967395
Application Number:	15037329
Application Number:	15127086
Application Number:	14485518
Application Number:	14424414
Application Number:	14372294
Application Number:	14448938
Application Number:	14579994
Application Number:	14778601
Application Number:	14340511
Application Number:	14610304
Application Number:	15100989
Application Number:	14466684
Application Number:	15112151
Application Number:	15101009
Application Number:	14399115
Application Number:	15462263
Application Number:	14458202
Application Number:	14278505
Application Number:	14449074
Application Number:	15306471
Application Number:	14449571
Application Number:	14448267
Application Number:	13696062
Application Number:	13505723

Property Type	Number
Application Number:	13805761
Application Number:	13805775
Application Number:	13636778
Application Number:	13825516
Application Number:	13637350
Application Number:	13997886
Application Number:	13814851
Application Number:	14681037
Application Number:	15024040
Application Number:	15122094
Application Number:	14579239
Application Number:	15101935
Application Number:	14447216
Application Number:	14430203
Application Number:	14300846
Application Number:	14298726
Application Number:	14498312
Application Number:	15790864
Application Number:	14515214
Application Number:	15643993
Application Number:	14538615
Application Number:	15687695
Application Number:	15461715
Application Number:	14717498
Application Number:	16194254
Application Number:	12535542
Application Number:	12535530
Application Number:	13380819
Application Number:	12707510
Application Number:	12707523
Application Number:	12770120
Application Number:	12554702
Application Number:	12727935
Application Number:	13878238
Application Number:	12835277
Application Number:	12707496
Application Number:	13132080
Application Number:	12844839

Property Type	Number
Application Number:	12539338
Application Number:	13202988
Application Number:	13148724
Application Number:	14985782
Application Number:	13119896
Application Number:	13123440
Application Number:	13129796
Application Number:	14532475
Application Number:	12543492
Application Number:	12553091
Application Number:	12943219
Application Number:	12761415
Application Number:	12538884
Application Number:	12538881
Application Number:	13263841
Application Number:	13141327
Application Number:	12849828
Application Number:	13203969
Application Number:	13319148
Application Number:	12709060
Application Number:	13129879
Application Number:	13202226
Application Number:	13125925
Application Number:	13260753
Application Number:	13203837
Application Number:	14487112
Application Number:	13255237
Application Number:	13376804
Application Number:	13254970
Application Number:	14039854
Application Number:	13496773
Application Number:	13203977
Application Number:	14368216
Application Number:	13807148
Application Number:	13634199
Application Number:	13641701
Application Number:	14864920
Application Number:	13265778

Property Type	Number
Application Number:	14006291
Application Number:	13701833
Application Number:	13576929
Application Number:	14160199
Application Number:	13574158
Application Number:	13522422
Application Number:	13318391
Application Number:	13814940
Application Number:	13497255
Application Number:	14425326
Application Number:	14428186
Application Number:	14410902
Application Number:	13322285
Application Number:	13514284
Application Number:	14352613
Application Number:	13254808
Application Number:	13814938
Application Number:	13818305
Application Number:	13576916
Application Number:	14028384
Application Number:	14441396
Application Number:	14355826
Application Number:	14241004
Application Number:	13878947
Application Number:	13579927
Application Number:	13510925
Application Number:	13508985
Application Number:	13391573
Application Number:	14338631
Application Number:	14117097
Application Number:	13643874
Application Number:	14146354
Application Number:	14007324
Application Number:	13637322
Application Number:	13817113
Application Number:	13499746
Application Number:	13817694
Application Number:	14957775

Property Type	Number
Application Number:	13977918
Application Number:	15140752
Application Number:	14430917
Application Number:	13810815
Application Number:	15051857
Application Number:	14357854
Application Number:	14349001
Application Number:	14124094
Application Number:	13817357
Application Number:	14408928
Application Number:	14000377
Application Number:	14239642
Application Number:	14130017
Application Number:	14114154
Application Number:	15449815
Application Number:	13819715
Application Number:	14004371
Application Number:	14007547
Application Number:	14114087
Application Number:	13876558
Application Number:	14004850
Application Number:	13990429
Application Number:	14408563
Application Number:	14239635
Application Number:	13879799
Application Number:	14390624
Application Number:	14907401
Application Number:	14126382
Application Number:	13989656
Application Number:	14006309
Application Number:	15060993
Application Number:	16039468
Application Number:	14403710
Application Number:	14127192
Application Number:	15924535
Application Number:	14357867
Application Number:	14763919
Application Number:	14441468

Property Type	Number
Application Number:	13985761
Application Number:	14122971
Application Number:	15056055
Application Number:	14765395
Application Number:	14647603
Application Number:	14358770
Application Number:	13855590
Application Number:	14652203
Application Number:	14422287
Application Number:	15657465
Application Number:	14421309
Application Number:	14006310
Application Number:	14363075
Application Number:	14358990
Application Number:	14365324
Application Number:	14410056
Application Number:	14412412
Application Number:	14647655
Application Number:	14408753
Application Number:	14361705
Application Number:	15110953
Application Number:	14438522
Application Number:	14386644
Application Number:	14372958
Application Number:	16155530
Application Number:	14781134
Application Number:	14655407
Application Number:	14408560
Application Number:	14894897
Application Number:	14368449
Application Number:	14894858
Application Number:	14374144
Application Number:	14409526
Application Number:	14409464
Application Number:	15367031
Application Number:	15109568
Application Number:	15312203
Application Number:	14382659

Property Type	Number
Application Number:	14408768
Application Number:	14431490
Application Number:	14438521
Application Number:	15459292
Application Number:	14409530
Application Number:	15299840
Application Number:	15128427
Application Number:	15507389
Application Number:	14434227
Application Number:	14443902
Application Number:	14390629
Application Number:	15296206
Application Number:	14648001
Application Number:	14387081
Application Number:	15429881
Application Number:	14376532
Application Number:	14787135
Application Number:	14440239
Application Number:	15589019
Application Number:	15031394
Application Number:	15318650
Application Number:	14428244
Application Number:	15203407
Application Number:	15483418
Application Number:	15504047
Application Number:	14785882
Application Number:	15317904
Application Number:	15122001
Application Number:	15125917
Application Number:	15119044
Application Number:	14432123
Application Number:	15518122
Application Number:	15510260
Application Number:	14647701
Application Number:	15786165
Application Number:	14435388
Application Number:	14439898
Application Number:	15092229

Property Type	Number
Application Number:	14439987
Application Number:	15540055
Application Number:	14442187
Application Number:	14767165
Application Number:	15500928
Application Number:	14768960
Application Number:	15540317
Application Number:	15564794
Application Number:	14777668
Application Number:	14905837
Application Number:	13817926
Application Number:	13701131
Application Number:	13825272
Application Number:	13809482
Application Number:	13878707
Application Number:	13877578
Application Number:	13882491
Application Number:	15049537
Application Number:	13813209
Application Number:	14441622
Application Number:	14130128
Application Number:	14007560
Application Number:	15864068
Application Number:	13983654
Application Number:	13976661
Application Number:	13995794
Application Number:	14408135
Application Number:	15200648
Application Number:	14352266
Application Number:	14342377
Application Number:	15626231
Application Number:	13978850
Application Number:	15098740
Application Number:	14008377
Application Number:	14232172
Application Number:	13981544
Application Number:	14333943
Application Number:	14371706

Property Type	Number
Application Number:	14370399
Application Number:	15973455
Application Number:	15477784
Application Number:	14358056
Application Number:	14118649
Application Number:	15843174
Application Number:	14372104
Application Number:	14234309
Application Number:	15112165
Application Number:	14343653
Application Number:	14382662
Application Number:	15092773
Application Number:	15705726
Application Number:	15953229
Application Number:	15114411
Application Number:	15117165
Application Number:	15115273
Application Number:	14378184
Application Number:	14384887
Application Number:	15117169
Application Number:	14916546
Application Number:	15726570
Application Number:	15804283
Application Number:	14278802
Application Number:	15117375
Application Number:	15707436
Application Number:	15991734
Application Number:	14384825
Application Number:	14384870
Application Number:	14425591
Application Number:	14454121
Application Number:	14440236
Application Number:	15684369
Application Number:	14301554
Application Number:	14955199
Application Number:	15277678
Application Number:	15864657
Application Number:	14296380

Property Type	Number
Application Number:	15934891
Application Number:	14384917
Application Number:	14305691
Application Number:	14456107
Application Number:	14518144
Application Number:	14492938
Application Number:	14491937
Application Number:	15622385
Application Number:	14480041
Application Number:	14617165
Application Number:	14434062
Application Number:	14787849
Application Number:	14761389
Application Number:	12541171
Application Number:	12551175
Application Number:	14325501
Application Number:	14992147
Application Number:	12506259
Application Number:	12551164
Application Number:	12504684
Application Number:	12195786
Application Number:	12257140
Application Number:	14100296
Application Number:	12550197
Application Number:	12554949
Application Number:	12550473
Application Number:	12551065
Application Number:	12648081
Application Number:	13709670
Application Number:	12550697
Application Number:	12638154
Application Number:	14577932
Application Number:	13254153
Application Number:	12750304
Application Number:	13619620
Application Number:	13102896
Application Number:	13130842
Application Number:	13390580

Property Type	Number
Application Number:	13395839
Application Number:	13263998
Application Number:	13202269
Application Number:	14129035
Application Number:	14590758
Application Number:	13147926
Application Number:	14946216
Application Number:	13582831
Application Number:	15463203
Application Number:	13498556
Application Number:	13859665
Application Number:	13949125
Application Number:	13497494
Application Number:	14988413
Application Number:	13378993
Application Number:	13643957
Application Number:	13700393
Application Number:	14717644
Application Number:	15008143
Application Number:	14397302
Application Number:	14399277
Application Number:	13576339
Application Number:	15050856
Application Number:	13641126
Application Number:	13582741
Application Number:	14440842
Application Number:	14661888
Application Number:	13635632
Application Number:	14128477
Application Number:	13978949
Application Number:	15933424
Application Number:	14350746
Application Number:	14409978
Application Number:	14769819
Application Number:	13822201
Application Number:	14974240
Application Number:	14782787
Application Number:	14402090

Property Type	Number
Application Number:	14383895
Application Number:	14369913
Application Number:	14648692
Application Number:	14123199
Application Number:	14833082
Application Number:	14715114
Application Number:	14407761
Application Number:	14371322
Application Number:	14782240
Application Number:	14780996
Application Number:	14354112
Application Number:	14354116
Application Number:	15345901
Application Number:	14481439
Application Number:	14520358
Application Number:	14905815
Application Number:	14522577
Application Number:	15611886
Application Number:	14830547
Application Number:	15355616
Application Number:	14549895
Application Number:	14640465
Application Number:	14809793
Application Number:	14924341
Application Number:	14524690
Application Number:	14716443
Application Number:	14933049
Application Number:	14824754
Application Number:	14706926
Application Number:	14660370
Application Number:	14694250
Application Number:	15326481
Application Number:	15326482
Application Number:	15290161
Application Number:	12666954
Application Number:	14092301
Application Number:	12593574
Application Number:	13793745

Property Type	Number
Application Number:	12530553
Application Number:	14054673
Application Number:	12597743
Application Number:	12665613
Application Number:	13314894
Application Number:	12665710
Application Number:	12544839
Application Number:	12663060
Application Number:	14194312
Application Number:	12663078
Application Number:	12663082
Application Number:	12601748
Application Number:	13767094
Application Number:	12601968
Application Number:	12664723
Application Number:	12161760
Application Number:	12598288
Application Number:	11783892
Application Number:	12600002
Application Number:	12664242
Application Number:	12665027
Application Number:	14088737
Application Number:	12665298
Application Number:	12666971
Application Number:	12640986
Application Number:	12642110
Application Number:	12564695
Application Number:	12641079
Application Number:	12639836
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Application Number:	13252428
Application Number:	12642279
Application Number:	13193137
Application Number:	12642392
Application Number:	12665020
Application Number:	12665434
Application Number:	12665320
Application Number:	12540766

Property Type	Number
Application Number:	12614014
Application Number:	13369136
Application Number:	12665107
Application Number:	12640967
Application Number:	12568188
Application Number:	12665153
Application Number:	12665295
Application Number:	12642407
Application Number:	12645113
Application Number:	12628850
Application Number:	12631623
Application Number:	12550629
Application Number:	12624972
Application Number:	12641662
Application Number:	12641115
Application Number:	14335583
Application Number:	12645085
Application Number:	12645309
Application Number:	13682669
Application Number:	12559228
Application Number:	12647711
Application Number:	12641991
Application Number:	12708054
Application Number:	12645385
Application Number:	12691462
Application Number:	13201607
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Application Number:	12969011
Application Number:	13000456
Application Number:	12855908
Application Number:	12645495
Application Number:	12645176
Application Number:	12644660
Application Number:	13834941
Application Number:	12778352

Property Type	Number
Application Number:	12999469
Application Number:	12643434
Application Number:	12645496
Application Number:	13201124
Application Number:	13000796
Application Number:	12993641
Application Number:	13058944
Application Number:	13131152
Application Number:	12644754
Application Number:	13392966
Application Number:	13791692
Application Number:	14690396
Application Number:	12770008
Application Number:	13439209
Application Number:	13139709
Application Number:	13139819
Application Number:	14152271
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Application Number:	12895544
Application Number:	13062496
Application Number:	12968984
Application Number:	12993094
Application Number:	13122957
Application Number:	13000421
Application Number:	14083279
Application Number:	13124558
Application Number:	13062516
Application Number:	13000127
Application Number:	12999628
Application Number:	13122877
Application Number:	13122961
Application Number:	13260154
Application Number:	14460227
Application Number:	13264977
Application Number:	13143715

Property Type	Number
Application Number:	13552325
Application Number:	13148174
Application Number:	13262898
Application Number:	14310034
Application Number:	13133614
Application Number:	13577729
Application Number:	13127301
Application Number:	13119731
Application Number:	13445254
Application Number:	13144544
Application Number:	13122912
Application Number:	14660769
Application Number:	10084480
Application Number:	10639471
Application Number:	10680157
Application Number:	13143173
Application Number:	14562533
Application Number:	13320733
Application Number:	13519296
Application Number:	13421947
Application Number:	13379211
Application Number:	13203966
Application Number:	13395540
Application Number:	13704329
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Application Number:	13256670
Application Number:	13823193
Application Number:	13395119
Application Number:	14517094
Application Number:	14000198
Application Number:	13254635
Application Number:	13879457

Property Type	Number
Application Number:	13264981
Application Number:	13148919
Application Number:	13860432
Application Number:	13522299
Application Number:	13641095
Application Number:	13388663
Application Number:	13503690
Application Number:	13878733
Application Number:	13514036
Application Number:	13518840
Application Number:	14054195
Application Number:	14293448
Application Number:	14565894
Application Number:	13641843
Application Number:	13522932
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Application Number:	15011721
Application Number:	13642689
Application Number:	13497636
Application Number:	14517262
Application Number:	15830280
Application Number:	13640888
Application Number:	13519308
Application Number:	15093702
Application Number:	13582009
Application Number:	13809539
Application Number:	13577508
Application Number:	13426868
Application Number:	13582710
Application Number:	13880034

Property Type	Number
Application Number:	13881144
Application Number:	13703657
Application Number:	14728740
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Application Number:	13642115
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Application Number:	13641242
Application Number:	13641288
Application Number:	13583779
Application Number:	14009098
Application Number:	13989792
Application Number:	13881731
Application Number:	14541161
Application Number:	13576383
Application Number:	13988304
Application Number:	13533774
Application Number:	13824276
Application Number:	13977318
Application Number:	13990427
Application Number:	13817803
Application Number:	14435205
Application Number:	13819793
Application Number:	13697294
Application Number:	13979994
Application Number:	13980027
Application Number:	13817775
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Application Number:	14706393
Application Number:	13820714
Application Number:	15137301
Application Number:	13641565
Application Number:	13885394
Application Number:	14781551
Application Number:	13991405

Property Type	Number
Application Number:	14908899
Application Number:	13878512
Application Number:	15014072
Application Number:	13809012
Application Number:	13814654
Application Number:	15290110
Application Number:	14787476
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Application Number:	14769285
Application Number:	14909033
Application Number:	14650555
Application Number:	15309179
Application Number:	13992745
Application Number:	14786473
Application Number:	14004653
Application Number:	13995312
Application Number:	14349656
Application Number:	14771873
Application Number:	14906530
Application Number:	14784535
Application Number:	14118315
Application Number:	15973452
Application Number:	13922780
Application Number:	15449019
Application Number:	15036369
Application Number:	14646031
Application Number:	15026611
Application Number:	14346855
Application Number:	15030880
Application Number:	14917278
Application Number:	14002595
Application Number:	14922671

Property Type	Number
Application Number:	14357476
Application Number:	14115030
Application Number:	15106291
Application Number:	14359478
Application Number:	15115622
Application Number:	14897216
Application Number:	15121788
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Application Number:	15012585
Application Number:	14890022
Application Number:	14732424
Application Number:	14394475
Application Number:	14769656
Application Number:	14784111
Application Number:	14784427
Application Number:	16108976
Application Number:	15303841
Application Number:	14895637
Application Number:	15121012
Application Number:	14327814
Application Number:	14284579
Application Number:	14895060
Application Number:	14316916
Application Number:	14547703
Application Number:	14444365
Application Number:	14456511
Application Number:	14631872
Application Number:	14808172
Application Number:	14990028
Application Number:	12303686

Property Type	Number
Application Number:	12123121
Application Number:	12198825
Application Number:	12395441
Application Number:	12366800
Application Number:	12545728
Application Number:	12766349
Application Number:	12999130
Application Number:	14483928
Application Number:	13121322
Application Number:	13143521
Application Number:	13119413
Application Number:	13809884
Application Number:	13121791
Application Number:	14297584
Application Number:	13123450
Application Number:	13863313
Application Number:	13132224
Application Number:	13142054
Application Number:	13511844
Application Number:	14982184
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Application Number:	13700078
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Application Number:	13505650
Application Number:	13695356
Application Number:	14611952
Application Number:	13503827
Application Number:	13805464
Application Number:	14175232
Application Number:	13577411
Application Number:	15387874
Application Number:	13580225
Application Number:	13636794
Application Number:	13989720
Application Number:	13977262
Application Number:	13809384
Application Number:	14304788

Property Type	Number
Application Number:	13978553
Application Number:	14455043
Application Number:	15067890
Application Number:	13576265
Application Number:	14708724
Application Number:	13636801
Application Number:	14305547
Application Number:	14884195
Application Number:	13642816
Application Number:	14972511
Application Number:	13697243
Application Number:	13575815
Application Number:	13635273
Application Number:	15657869
Application Number:	14235406
Application Number:	13700104
Application Number:	13701349
Application Number:	13534613
Application Number:	13996323
Application Number:	13995840
Application Number:	13996724
Application Number:	13805785
Application Number:	15238178
Application Number:	13701359
Application Number:	13701324
Application Number:	15084879
Application Number:	13701370
Application Number:	13810497
Application Number:	14951685
Application Number:	13825096
Application Number:	13996331
Application Number:	13878153
Application Number:	14926417
Application Number:	13878357
Application Number:	13885754
Application Number:	14693400
Application Number:	15941476
Application Number:	15026606

Property Type	Number
Application Number:	15110466
Application Number:	13882493
Application Number:	13996290
Application Number:	14908340
Application Number:	14376330
Application Number:	15466178
Application Number:	14118090
Application Number:	14124389
Application Number:	14343968
Application Number:	14007635
Application Number:	15297434
Application Number:	14375902
Application Number:	14372925
Application Number:	15294868
Application Number:	15117730
Application Number:	14118707
Application Number:	14130018
Application Number:	14377388
Application Number:	14372340
Application Number:	14377410
Application Number:	14128692
Application Number:	14385015
Application Number:	14377612
Application Number:	14384962
Application Number:	14377393
Application Number:	15822499
Application Number:	14758595
Application Number:	15601135
Application Number:	14785650
Application Number:	15947243
Application Number:	15128957
Application Number:	14388551
Application Number:	15308611
Application Number:	15984367
Application Number:	14785647
Application Number:	15612057
Application Number:	14888850
Application Number:	16035364

Property Type	Number
Application Number:	14298973
Application Number:	14888861
Application Number:	15941130
Application Number:	14784595
Application Number:	14295936
Application Number:	15843067
Application Number:	14334906
Application Number:	14302434
Application Number:	14404002
Application Number:	14487114
Application Number:	14430757
Application Number:	15545448
Application Number:	14574068
Application Number:	14980692
Application Number:	15157557
Application Number:	14110919
Application Number:	13445805
Application Number:	13583540
Application Number:	14117618
Application Number:	13509351
Application Number:	14975690
Application Number:	14891810
Application Number:	13003222
Application Number:	12710508
Application Number:	12714482
Application Number:	12647256
Application Number:	13003235
Application Number:	15489111
Application Number:	12992120
Application Number:	14606672
Application Number:	13140328
Application Number:	12971140
Application Number:	12867177
Application Number:	13063428
Application Number:	13123612
Application Number:	13062936
Application Number:	13394812
Application Number:	13392800

Property Type	Number
Application Number:	13054867
Application Number:	13575549
Application Number:	13264675
Application Number:	14321300
Application Number:	14830268
Application Number:	15837304
Application Number:	13389586
Application Number:	13643273
Application Number:	15382816
Application Number:	13579248
Application Number:	14154850
Application Number:	14492814
Application Number:	13700836
Application Number:	13994438
Application Number:	13939915
Application Number:	14001174
Application Number:	14124007
Application Number:	14000527
Application Number:	14353494
Application Number:	14435747
Application Number:	12200271
Application Number:	12200438
Application Number:	12200043
Application Number:	12202282
Application Number:	12201298
Application Number:	12201329
Application Number:	12400631
Application Number:	14457298
Application Number:	15935849
Application Number:	12478614
Application Number:	14063003
Application Number:	12201403
Application Number:	12201381
Application Number:	12201415
Application Number:	14055447
Application Number:	12200096
Application Number:	12200077
Application Number:	12479280

Property Type	Number
Application Number:	15138383
Application Number:	12390957
Application Number:	12396939
Application Number:	14159196
Application Number:	12487669
Application Number:	12463460
Application Number:	12538879
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Application Number:	12389236
Application Number:	13371782
Application Number:	12467943
Application Number:	14256575
Application Number:	12435213
Application Number:	13293932
Application Number:	12503619
Application Number:	13857874
Application Number:	12422172
Application Number:	12467753
Application Number:	12417478
Application Number:	12512823
Application Number:	12511457
Application Number:	12401380
Application Number:	12507550
Application Number:	13246636
Application Number:	12546499
Application Number:	12507683
Application Number:	12511214
Application Number:	12506148
Application Number:	13657630
Application Number:	13657659
Application Number:	12488200
Application Number:	13493841
Application Number:	12492015
Application Number:	12509087
Application Number:	12367287
Application Number:	14563709

Property Type	Number
Application Number:	15829200
Application Number:	12467919
Application Number:	12497242
Application Number:	12542096
Application Number:	12463969
Application Number:	12367237
Application Number:	12431912
Application Number:	12490702
Application Number:	12396777
Application Number:	13311375
Application Number:	12396787
Application Number:	13564837
Application Number:	12358253
Application Number:	13655471
Application Number:	14530845
Application Number:	14975796
Application Number:	15612216
Application Number:	12416156
Application Number:	12429580
Application Number:	12429524
Application Number:	12429539
Application Number:	12423368
Application Number:	12351697
Application Number:	12508549
Application Number:	12511955
Application Number:	12392903
Application Number:	12545063
Application Number:	12470256
Application Number:	12557845
Application Number:	12436657
Application Number:	12432661
Application Number:	14256616
Application Number:	12436644
Application Number:	12432599
Application Number:	12400488
Application Number:	12557827
Application Number:	12430503
Application Number:	12557985

Property Type	Number
Application Number:	12427602
Application Number:	12557971
Application Number:	12427609
Application Number:	12427598
Application Number:	12545625
Application Number:	12392928
Application Number:	12500667
Application Number:	12489197
Application Number:	14034367
Application Number:	12401124
Application Number:	12402332
Application Number:	12392889
Application Number:	12392913
Application Number:	14030884
Application Number:	12436550
Application Number:	13465893
Application Number:	12502304
Application Number:	12551790
Application Number:	13758792
Application Number:	14275815
Application Number:	15096305
Application Number:	12507696
Application Number:	12508457
Application Number:	12507671
Application Number:	12507952
Application Number:	12508552
Application Number:	12390506
Application Number:	13784850
Application Number:	14994266
Application Number:	15887157
Application Number:	12428563
Application Number:	12506383
Application Number:	12506391
Application Number:	13677770
Application Number:	12465711
Application Number:	12465717
Application Number:	12540324
Application Number:	14199329

Property Type	Number
Application Number:	15852586
Application Number:	12546516
Application Number:	12426097
Application Number:	13432821
Application Number:	12478661
Application Number:	13685181
Application Number:	12547382
Application Number:	12541098
Application Number:	13648274
Application Number:	12551209
Application Number:	12984275
Application Number:	12550119
Application Number:	12550132
Application Number:	12479665
Application Number:	12423374
Application Number:	14752787
Application Number:	12405607
Application Number:	12481554
Application Number:	12479565
Application Number:	13742944
Application Number:	13742927
Application Number:	14805870
Application Number:	12415518
Application Number:	13728489
Application Number:	13728674
Application Number:	12415523
Application Number:	12479584
Application Number:	12463984
Application Number:	13855421
Application Number:	14095252
Application Number:	12415027
Application Number:	13941853
Application Number:	14293376
Application Number:	14885515
Application Number:	15961575
Application Number:	12426139
Application Number:	14171323
Application Number:	12426141

Property Type	Number
Application Number:	13547194
Application Number:	12463982
Application Number:	12463979
Application Number:	13584277
Application Number:	12433696
Application Number:	12463977
Application Number:	12433700
Application Number:	14192073
Application Number:	15350721
Application Number:	15817568
Application Number:	16180193
Application Number:	12433706
Application Number:	12464384
Application Number:	12486446
Application Number:	12464387
Application Number:	12486451
Application Number:	12496992
Application Number:	14996246
Application Number:	12415060
Application Number:	12487054
Application Number:	12551550
Application Number:	14281899
Application Number:	12434414
Application Number:	12416160
Application Number:	12411405
Application Number:	13738948
Application Number:	15707572
Application Number:	12358258
Application Number:	13275299
Application Number:	14037403
Application Number:	14855386
Application Number:	12534393
Application Number:	13771523
Application Number:	12506079
Application Number:	13654130
Application Number:	12408075
Application Number:	12502132
Application Number:	12502124

Property Type	Number
Application Number:	13598278
Application Number:	15428804
Application Number:	12578321
Application Number:	12578295
Application Number:	12578336
Application Number:	12582301
Application Number:	12648124
Application Number:	14021940
Application Number:	12649659
Application Number:	13410526
Application Number:	12605744
Application Number:	12606771
Application Number:	15600583
Application Number:	12997862
Application Number:	12643868
Application Number:	12624833
Application Number:	12713220
Application Number:	12644658
Application Number:	12648529
Application Number:	12648092
Application Number:	12621424
Application Number:	13747309
Application Number:	12996010
Application Number:	13923250
Application Number:	12732012
Application Number:	13887361
Application Number:	12996972
Application Number:	12635319
Application Number:	12642871
Application Number:	14294146
Application Number:	12635147
Application Number:	15049585
Application Number:	12578270
Application Number:	12577378
Application Number:	13519309
Application Number:	14987077
Application Number:	13702267
Application Number:	13702547

Property Type	Number
Application Number:	12685114
Application Number:	13751811
Application Number:	13058831
Application Number:	12625962
Application Number:	12626017
Application Number:	12620477
Application Number:	12638224
Application Number:	12577909
Application Number:	13785861
Application Number:	13145291
Application Number:	12642355
Application Number:	12579718
Application Number:	12580940
Application Number:	12618670
Application Number:	14047544
Application Number:	12611083
Application Number:	14644957
Application Number:	12724660
Application Number:	13479676
Application Number:	13919705
Application Number:	14851226
Application Number:	12641153
Application Number:	12714011
Application Number:	12536411
Application Number:	12714078
Application Number:	12999250
Application Number:	14073449
Application Number:	12997503
Application Number:	12715373
Application Number:	12719797
Application Number:	14094623
Application Number:	12716084
Application Number:	12640705
Application Number:	12720858
Application Number:	12715868
Application Number:	12719086
Application Number:	12719100
Application Number:	13787046

Property Type	Number
Application Number:	13382498
Application Number:	13148167
Application Number:	15469687
Application Number:	12717034
Application Number:	15112660
Application Number:	16137725
Application Number:	12714060
Application Number:	12999963
Application Number:	12999100
Application Number:	12720221
Application Number:	13572377
Application Number:	12724023
Application Number:	13058829
Application Number:	12999835
Application Number:	13002263
Application Number:	13974972
Application Number:	12719651
Application Number:	12881727
Application Number:	13202356
Application Number:	12997859
Application Number:	13121175
Application Number:	13466868
Application Number:	12637780
Application Number:	13498071
Application Number:	13002272
Application Number:	13413490
Application Number:	12720755
Application Number:	14253451
Application Number:	13384174
Application Number:	14497574
Application Number:	13202565
Application Number:	13126448
Application Number:	13131111
Application Number:	13729508
Application Number:	12995440
Application Number:	14043836
Application Number:	12993167
Application Number:	15991896

Property Type	Number
Application Number:	13260120
Application Number:	14208175
Application Number:	12999182
Application Number:	13202816
Application Number:	13128627
Application Number:	12999269
Application Number:	13003717
Application Number:	12999978
Application Number:	12999784
Application Number:	13202559
Application Number:	13125006
Application Number:	13059131
Application Number:	13322082
Application Number:	12999461
Application Number:	14303326
Application Number:	12999684
Application Number:	13126085
Application Number:	14657902
Application Number:	13063721
Application Number:	12999770
Application Number:	12999933
Application Number:	13202933
Application Number:	12999301
Application Number:	13142093
Application Number:	12999513
Application Number:	14472975
Application Number:	12999594
Application Number:	13394471
Application Number:	13322393
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Application Number:	13546333
Application Number:	12999694
Application Number:	14055445
Application Number:	13257949
Application Number:	13059808
Application Number:	13816178
Application Number:	13260021
Application Number:	13129099

Property Type	Number
Application Number:	14035177
Application Number:	13264223
Application Number:	12895666
Application Number:	13059744
Application Number:	12999561
Application Number:	13124745
Application Number:	13056026
Application Number:	14001938
Application Number:	13144629
Application Number:	13054055
Application Number:	14084413
Application Number:	13129371
Application Number:	13129557
Application Number:	13946961
Application Number:	13641908
Application Number:	14820184
Application Number:	13378976
Application Number:	13383802
Application Number:	13517458
Application Number:	14176833
Application Number:	13383955
Application Number:	13002080
Application Number:	14176362
Application Number:	13143282
Application Number:	13002043
Application Number:	14169145
Application Number:	13148166
Application Number:	14124585
Application Number:	13501036
Application Number:	13054882
Application Number:	14574329
Application Number:	13126115
Application Number:	12999141
Application Number:	13950923
Application Number:	13500881
Application Number:	13123816
Application Number:	14048682
Application Number:	13318098

Property Type	Number
Application Number:	13531940
Application Number:	13319159
Application Number:	15080605
Application Number:	13129531
Application Number:	14172753
Application Number:	13501042
Application Number:	13260157
Application Number:	15587382
Application Number:	13318398
Application Number:	13387210
Application Number:	13499392
Application Number:	14583533
Application Number:	13128207
Application Number:	14065290
Application Number:	13058303
Application Number:	13122189
Application Number:	13121964
Application Number:	14506220
Application Number:	15156635
Application Number:	13391580
Application Number:	13604781
Application Number:	13057082
Application Number:	13499402
Application Number:	14069073
Application Number:	14054851
Application Number:	13059826
Application Number:	13061677
Application Number:	13127798
Application Number:	14632457
Application Number:	13388142
Application Number:	14074329
Application Number:	13144869
Application Number:	13580648
Application Number:	13147266
Application Number:	13500542
Application Number:	13262825
Application Number:	13139583
Application Number:	13554783

Property Type	Number
Application Number:	13974402
Application Number:	13514521
Application Number:	13130818
Application Number:	13975282
Application Number:	13139328
Application Number:	13382384
Application Number:	15071067
Application Number:	13264236
Application Number:	13264702
Application Number:	13816552
Application Number:	13144401
Application Number:	13503628
Application Number:	14332878
Application Number:	15613349
Application Number:	13263417
Application Number:	13263835
Application Number:	14797703
Application Number:	15979209
Application Number:	13980535
Application Number:	13500052
Application Number:	13380301
Application Number:	14979130
Application Number:	13133942
Application Number:	13384859
Application Number:	13145948
Application Number:	13386736
Application Number:	14259663
Application Number:	13515001
Application Number:	14973721
Application Number:	15877354
Application Number:	13142530
Application Number:	14440344
Application Number:	13940024
Application Number:	13260899
Application Number:	14538202
Application Number:	13143726
Application Number:	13497442
Application Number:	14859322

Property Type	Number
Application Number:	13443576
Application Number:	13503624
Application Number:	13461475
Application Number:	13266104
Application Number:	13517182
Application Number:	13140102
Application Number:	13260234
Application Number:	14850826
Application Number:	13139240
Application Number:	14655293
Application Number:	14913239
Application Number:	13202082
Application Number:	13391038
Application Number:	13319834
Application Number:	13389432
Application Number:	15047739
Application Number:	15815823
Application Number:	15026915
Application Number:	13381329
Application Number:	13383516
Application Number:	13375262
Application Number:	13383358
Application Number:	13390264
Application Number:	13519806
Application Number:	13519569
Application Number:	13512700
Application Number:	13255905
Application Number:	13142280
Application Number:	13521908
Application Number:	13389582
Application Number:	13650722
Application Number:	13642018
Application Number:	13390337
Application Number:	14483120
Application Number:	15854117
Application Number:	13386990
Application Number:	13377971
Application Number:	14265991

Property Type	Number
Application Number:	13391158
Application Number:	14657886
Application Number:	13377085
Application Number:	13386095
Application Number:	14480189
Application Number:	13319500
Application Number:	13554633
Application Number:	13387546
Application Number:	13264710
Application Number:	13496064
Application Number:	13642485
Application Number:	13498424
Application Number:	13320904
Application Number:	15361638
Application Number:	13321081
Application Number:	13264672
Application Number:	13383794
Application Number:	14640933
Application Number:	13703338
Application Number:	13321792
Application Number:	14046376
Application Number:	13509699
Application Number:	13579929
Application Number:	13390329
Application Number:	13578419
Application Number:	13702013
Application Number:	13262089
Application Number:	15018959
Application Number:	13636527
Application Number:	13821560
Application Number:	15633636
Application Number:	13879594
Application Number:	15469933
Application Number:	13395880
Application Number:	14572733
Application Number:	13808159
Application Number:	13946710
Application Number:	13816702

Property Type	Number
Application Number:	13814504
Application Number:	13636523
Application Number:	13816075
Application Number:	13823291
Application Number:	13574246
Application Number:	13640360
Application Number:	13511117
Application Number:	13824105
Application Number:	14226398
Application Number:	13822221
Application Number:	13978239
Application Number:	13497529
Application Number:	13445567
Application Number:	13614279
Application Number:	13956941
Application Number:	13577859
Application Number:	13389796
Application Number:	13823305
Application Number:	13520876
Application Number:	14566138
Application Number:	13640272
Application Number:	14703730
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Application Number:	13389380
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Application Number:	15145920
Application Number:	13580512
Application Number:	14559563
Application Number:	13515052
Application Number:	14593326
Application Number:	13514337
Application Number:	13503781
Application Number:	13515404
Application Number:	13509321
Application Number:	13811758
Application Number:	14567875

Property Type	Number
Application Number:	13522429
Application Number:	13813588
Application Number:	13519393
Application Number:	14736365
Application Number:	13519730
Application Number:	14476648
Application Number:	13814996
Application Number:	13498909
Application Number:	15604604
Application Number:	13811280
Application Number:	13642502
Application Number:	13500907
Application Number:	14649498
Application Number:	13579018
Application Number:	13577382
Application Number:	14260835
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Application Number:	13640797
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Application Number:	13642904
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Application Number:	14232797
Application Number:	14239471
Application Number:	14716194
Application Number:	13977482
Application Number:	13521440
Application Number:	13502312
Application Number:	13811220
Application Number:	13642403
Application Number:	14710307
Application Number:	13637206
Application Number:	13810324
Application Number:	13579131
Application Number:	14943947
Application Number:	13883446
Application Number:	15174405

Property Type	Number
Application Number:	13579485
Application Number:	13882424
Application Number:	14394827
Application Number:	13521435
Application Number:	13577486
Application Number:	13497671
Application Number:	14437331
Application Number:	13950851
Application Number:	13522016
Application Number:	13761576
Application Number:	13812402
Application Number:	13738424
Application Number:	14396058
Application Number:	15836167
Application Number:	13877422
Application Number:	14687452
Application Number:	13749291
Application Number:	13634448
Application Number:	13582937
Application Number:	13825492
Application Number:	13879517
Application Number:	13512554
Application Number:	14301172
Application Number:	14654335
Application Number:	13634335
Application Number:	13878180
Application Number:	15651904
Application Number:	13884116
Application Number:	13817695
Application Number:	13520464
Application Number:	14686608
Application Number:	13640307
Application Number:	13761512
Application Number:	14297990
Application Number:	15462994
Application Number:	13700417
Application Number:	13576471
Application Number:	13521578

Property Type	Number
Application Number:	13880194
Application Number:	13879544
Application Number:	13809543
Application Number:	13809049
Application Number:	14857316
Application Number:	13817533
Application Number:	15063614
Application Number:	13884256
Application Number:	13812400
Application Number:	14657716
Application Number:	13985523
Application Number:	13879751
Application Number:	14234990
Application Number:	14729368
Application Number:	13583706
Application Number:	14411025
Application Number:	13640283
Application Number:	13878531
Application Number:	13879700
Application Number:	13819776
Application Number:	15152159
Application Number:	13789010
Application Number:	13982607
Application Number:	13430090
Application Number:	13982344
Application Number:	14764696
Application Number:	13811733
Application Number:	14491717
Application Number:	13885306
Application Number:	13810279
Application Number:	13879723
Application Number:	13812967
Application Number:	13640046
Application Number:	14724713
Application Number:	13634502
Application Number:	13989798
Application Number:	15450020
Application Number:	13811643

Property Type	Number
Application Number:	13819889
Application Number:	13634013
Application Number:	13879708
Application Number:	13997890
Application Number:	14541588
Application Number:	13823361
Application Number:	13582912
Application Number:	14725874
Application Number:	14009279
Application Number:	13995411
Application Number:	13827155
Application Number:	13817008
Application Number:	14006801
Application Number:	14005520
Application Number:	14123231
Application Number:	14360657
Application Number:	13640469
Application Number:	14470733
Application Number:	13635395
Application Number:	14005232
Application Number:	13578025
Application Number:	14488453
Application Number:	13876473
Application Number:	13940017
Application Number:	13811384
Application Number:	14873169
Application Number:	14770756
Application Number:	14768532
Application Number:	15289714
Application Number:	14233848
Application Number:	13830068
Application Number:	13813715
Application Number:	13700683
Application Number:	14919296
Application Number:	14771400
Application Number:	14363049
Application Number:	13877413
Application Number:	13816717

Property Type	Number
Application Number:	15027170
Application Number:	13578518
Application Number:	14763739
Application Number:	13978655
Application Number:	13816988
Application Number:	13877377
Application Number:	14827476
Application Number:	13879713
Application Number:	14001870
Application Number:	13877216
Application Number:	14407072
Application Number:	15336808
Application Number:	14411917
Application Number:	13816134
Application Number:	14796259
Application Number:	13819745
Application Number:	13982620
Application Number:	13876160
Application Number:	14992042
Application Number:	15477229
Application Number:	13995339
Application Number:	14009750
Application Number:	14418871
Application Number:	14112037
Application Number:	14112036
Application Number:	14769778
Application Number:	14785323
Application Number:	13701445
Application Number:	13980033
Application Number:	13642775
Application Number:	13810496
Application Number:	15361622
Application Number:	13879941
Application Number:	13643041
Application Number:	13816102
Application Number:	15002695
Application Number:	14909419
Application Number:	14888386

Property Type	Number
Application Number:	13816419
Application Number:	13823104
Application Number:	14901403
Application Number:	13701197
Application Number:	14995788
Application Number:	13810818
Application Number:	14006071
Application Number:	14118006
Application Number:	13990309
Application Number:	14820431
Application Number:	14112275
Application Number:	13982807
Application Number:	15268226
Application Number:	13988015
Application Number:	13876163
Application Number:	13702907
Application Number:	14110119
Application Number:	13991382
Application Number:	14851245
Application Number:	15708517
Application Number:	15100616
Application Number:	13881416
Application Number:	13881540
Application Number:	13878538
Application Number:	14764302
Application Number:	15394505
Application Number:	14910874
Application Number:	14129864
Application Number:	14004902
Application Number:	14356391
Application Number:	14915217
Application Number:	13878126
Application Number:	14739443
Application Number:	14766971
Application Number:	14363792
Application Number:	15474577
Application Number:	13885996
Application Number:	13885160

Property Type	Number
Application Number:	14426157
Application Number:	13994882
Application Number:	14009095
Application Number:	14031056
Application Number:	14769818
Application Number:	14350038
Application Number:	15463862
Application Number:	14406147
Application Number:	14414452
Application Number:	13977670
Application Number:	13876766
Application Number:	13978877
Application Number:	14114524
Application Number:	13988417
Application Number:	14916743
Application Number:	14400557
Application Number:	14110132
Application Number:	14785477
Application Number:	14906540
Application Number:	13980041
Application Number:	14840612
Application Number:	14371180
Application Number:	15401114
Application Number:	14342333
Application Number:	14769806
Application Number:	14234380
Application Number:	14238457
Application Number:	14783309
Application Number:	15863003
Application Number:	14390383
Application Number:	14763161
Application Number:	14894999
Application Number:	14356150
Application Number:	14351508
Application Number:	13850671
Application Number:	14237084
Application Number:	14910640
Application Number:	14785582

Property Type	Number
Application Number:	14114732
Application Number:	14118626
Application Number:	14124569
Application Number:	14358146
Application Number:	14344795
Application Number:	14351829
Application Number:	14348143
Application Number:	15031687
Application Number:	14009101
Application Number:	14575809
Application Number:	14468238
Application Number:	14373026
Application Number:	15402389
Application Number:	14769753
Application Number:	14892525
Application Number:	14238470
Application Number:	15104125
Application Number:	14119171
Application Number:	14728645
Application Number:	14457128
Application Number:	14003770
Application Number:	15031701
Application Number:	15300272
Application Number:	14364076
Application Number:	14376816
Application Number:	14127969
Application Number:	14796238
Application Number:	14898369
Application Number:	14235958
Application Number:	14238542
Application Number:	14901676
Application Number:	14783472
Application Number:	14379630
Application Number:	14352655
Application Number:	15017982
Application Number:	14350771
Application Number:	14386300
Application Number:	14306406

Property Type	Number
Application Number:	14647079
Application Number:	14376133
Application Number:	14372008
Application Number:	15035472
Application Number:	14239970
Application Number:	14414382
Application Number:	15024888
Application Number:	15107607
Application Number:	14899123
Application Number:	15123985
Application Number:	14907285
Application Number:	14380698
Application Number:	15197767
Application Number:	14241052
Application Number:	14379492
Application Number:	14594253
Application Number:	15032045
Application Number:	14906752
Application Number:	15125571
Application Number:	14373897
Application Number:	14380372
Application Number:	14384677
Application Number:	15867211
Application Number:	14347894
Application Number:	14887902
Application Number:	15633235
Application Number:	14359247
Application Number:	14526434
Application Number:	14351070
Application Number:	14649505
Application Number:	15128895
Application Number:	14758404
Application Number:	15495126
Application Number:	14118992
Application Number:	15110699
Application Number:	14337748
Application Number:	14380371
Application Number:	14457960

Property Type	Number
Application Number:	15252250
Application Number:	14445991
Application Number:	15299483
Application Number:	14450203
Application Number:	14128201
Application Number:	14812664
Application Number:	14373625
Application Number:	16198482
Application Number:	15125576
Application Number:	14370436
Application Number:	14376125
Application Number:	14371730
Application Number:	15495517
Application Number:	14353238
Application Number:	14362583
Application Number:	15120446
Application Number:	14651091
Application Number:	15612452
Application Number:	15483740
Application Number:	14360288
Application Number:	14364017
Application Number:	15117332
Application Number:	14372407
Application Number:	14390368
Application Number:	14372439
Application Number:	15306004
Application Number:	15306021
Application Number:	14548264
Application Number:	14761599
Application Number:	14370637
Application Number:	14515425
Application Number:	15494109
Application Number:	14603277
Application Number:	14413414
Application Number:	14338217
Application Number:	15112131
Application Number:	15120751
Application Number:	14647075

Property Type	Number
Application Number:	15424065
Application Number:	14373829
Application Number:	15470073
Application Number:	14375296
Application Number:	14442093
Application Number:	14758812
Application Number:	15125523
Application Number:	14457479
Application Number:	14295286
Application Number:	14488125
Application Number:	15712475
Application Number:	14291124
Application Number:	14666058
Application Number:	14324074
Application Number:	14456965
Application Number:	14316527
Application Number:	14430891
Application Number:	14380908
Application Number:	14492186
Application Number:	14760951
Application Number:	14383720
Application Number:	14873401
Application Number:	15107927
Application Number:	15109833
Application Number:	14421101
Application Number:	15123144
Application Number:	14482958
Application Number:	14475360
Application Number:	15508416
Application Number:	15309393
Application Number:	14391640
Application Number:	15436078
Application Number:	14420858
Application Number:	15729126
Application Number:	14329795
Application Number:	14334465
Application Number:	15106851
Application Number:	14479817

Property Type	Number
Application Number:	14649894
Application Number:	14282055
Application Number:	14297450
Application Number:	14293363
Application Number:	14304653
Application Number:	16111577
Application Number:	14308262
Application Number:	14413418
Application Number:	14573259
Application Number:	14405084
Application Number:	14413223
Application Number:	14311807
Application Number:	15700907
Application Number:	14630644
Application Number:	14290883
Application Number:	14480007
Application Number:	16101285
Application Number:	14523458
Application Number:	14567278
Application Number:	14596078
Application Number:	14496092
Application Number:	14479909
Application Number:	14455312
Application Number:	14934774
Application Number:	14741328
Application Number:	14325280
Application Number:	14558447
Application Number:	14494319
Application Number:	14458577
Application Number:	15286222
Application Number:	14454326
Application Number:	14665472
Application Number:	14479945
Application Number:	14665726
Application Number:	14761935
Application Number:	14614763
Application Number:	14438223
Application Number:	14431034

Property Type	Number
Application Number:	14437831
Application Number:	14651191
Application Number:	14858979
Application Number:	14858970
Application Number:	14859096
Application Number:	14859108
Application Number:	14858947
Application Number:	14761253
Application Number:	14787322
Application Number:	15581758
Application Number:	12665704
Application Number:	14412000
Application Number:	14410524
Application Number:	14403124
Application Number:	14959000
Application Number:	14761544
Application Number:	15032331
Application Number:	15111231
Application Number:	13580945
Application Number:	13884603
Application Number:	14410529
Application Number:	15030037
Application Number:	15117395
Application Number:	15555893
Application Number:	15308018
Application Number:	13321316
Application Number:	13126109
Application Number:	13881148
Application Number:	13380767
Application Number:	13636027
Application Number:	14223017
Application Number:	14778436
Application Number:	14898442
Application Number:	14443867
Application Number:	14761268
Application Number:	13837904
Application Number:	14982431
Application Number:	14777282

Property Type	Number
Application Number:	14780492
Application Number:	14877635
Application Number:	14122559
Application Number:	14762691
Application Number:	13576000
Application Number:	15287367
Application Number:	13018477
Application Number:	12609011
Application Number:	12634251
Application Number:	12171812
Application Number:	12540724
Application Number:	12540843
Application Number:	12707400
Application Number:	12507938
Application Number:	12485692
Application Number:	12727961
Application Number:	12372556
Application Number:	13615264
Application Number:	14247098
Application Number:	12487781
Application Number:	12999029
Application Number:	12999266
Application Number:	12997831
Application Number:	12836843
Application Number:	12727049
Application Number:	12785040
Application Number:	12827906
Application Number:	12847571
Application Number:	13795816
Application Number:	13274001
Application Number:	15006818
Application Number:	15833579
Application Number:	13835486
Application Number:	12200737
Application Number:	13185270
Application Number:	12198842
Application Number:	12545678
Application Number:	13758115

Property Type	Number
Application Number:	12606880
Application Number:	12498228
Application Number:	14322695
Application Number:	12498265
Application Number:	12493800
Application Number:	12472168
Application Number:	12498204
Application Number:	13485241
Application Number:	12620602
Application Number:	13279945
Application Number:	12432967
Application Number:	12498257
Application Number:	12430447
Application Number:	12606852
Application Number:	12482997
Application Number:	12625314
Application Number:	14023926
Application Number:	14225368
Application Number:	12633575
Application Number:	14173422
Application Number:	12695288
Application Number:	12650031
Application Number:	12696652
Application Number:	13033547
Application Number:	13262886
Application Number:	13979589
Application Number:	14357770
Application Number:	14446155
Application Number:	14335580
Application Number:	15023694
Application Number:	14394679
Application Number:	13977893
Application Number:	14319740
Application Number:	12754916
Application Number:	12628721
Application Number:	12632437
Application Number:	12633437
Application Number:	12756612

Property Type	Number
Application Number:	13755728
Application Number:	14142209
Application Number:	13377493
Application Number:	13376102
Application Number:	13496705
Application Number:	13497477
Application Number:	14150110
Application Number:	13503815
Application Number:	13513068
Application Number:	14134899
Application Number:	14364574
Application Number:	13991605
Application Number:	15141629
Application Number:	13825661
Application Number:	13884721
Application Number:	14413635
Application Number:	13879804
Application Number:	14769808
Application Number:	14455780
Application Number:	14455699
Application Number:	14309554
Application Number:	14455387
Application Number:	14902480
Application Number:	14464420
Application Number:	15658027
Application Number:	14539790
Application Number:	14910809
Application Number:	14547311
Application Number:	14681849
Application Number:	13997036
Application Number:	13504841
Application Number:	13458899
Application Number:	14098184
Application Number:	14629408
Application Number:	15887561
Application Number:	13324587
Application Number:	13509387
Application Number:	13824761

Property Type	Number
Application Number:	15874433
Application Number:	14810231
Application Number:	12791816
Application Number:	13439251
Application Number:	12951803
Application Number:	13133143
Application Number:	14255715
Application Number:	13133936
Application Number:	13141242
Application Number:	13376440
Application Number:	14288266
Application Number:	13376502
Application Number:	14208877
Application Number:	12950262
Application Number:	14127640
Application Number:	13382888
Application Number:	13481656
Application Number:	13505059
Application Number:	14251396
Application Number:	13503349
Application Number:	13818587
Application Number:	13821391
Application Number:	15021917
Application Number:	11886020
Application Number:	12708410
Application Number:	12999434
Application Number:	13590033
Application Number:	12196100
Application Number:	12195943
Application Number:	12182882
Application Number:	12196086
Application Number:	12196002
Application Number:	12175128
Application Number:	12191900
Application Number:	10586148
Application Number:	12439441
Application Number:	12524254
Application Number:	12523917

Property Type	Number
Application Number:	13860674
Application Number:	12089855
Application Number:	12712760
Application Number:	13710346
Application Number:	13710330
Application Number:	12647116
Application Number:	12938193
Application Number:	14228606
Application Number:	11665337
Application Number:	12161128
Application Number:	12196871
Application Number:	12209851
Application Number:	12857283
Application Number:	12836733
Application Number:	12767924
Application Number:	12233339
Application Number:	12197961
Application Number:	13089206
Application Number:	12238306
Application Number:	12234529
Application Number:	14622092
Application Number:	12198744
Application Number:	13365115
Application Number:	12211006
Application Number:	12234560
Application Number:	12985581
Application Number:	12197754
Application Number:	12196092
Application Number:	12194361
Application Number:	12199733
Application Number:	12198815
Application Number:	13210274
Application Number:	12198835
Application Number:	12192024
Application Number:	12195347
Application Number:	12234491
Application Number:	13030065
Application Number:	12196194

Property Type	Number
Application Number:	12200447
Application Number:	13346094
Application Number:	12197994
Application Number:	12195330
Application Number:	12199358
Application Number:	13404517
Application Number:	12198790
Application Number:	12197568
Application Number:	12405764
Application Number:	13523019
Application Number:	12665435
Application Number:	12365404
Application Number:	12665601
Application Number:	12665308
Application Number:	12665635
Application Number:	12354463
Application Number:	13885390
Application Number:	14778366
Application Number:	14758421
Application Number:	14758210
Application Number:	15507552
Application Number:	15502640
Application Number:	12770466
Application Number:	15117998
Application Number:	12516493
Application Number:	12516497
Application Number:	12516500
Application Number:	12516705
Application Number:	12516643
Application Number:	12516715
Application Number:	12521244
Application Number:	12153661
Application Number:	13404667
Application Number:	12153662
Application Number:	13414794
Application Number:	12529217
Application Number:	13739638
Application Number:	12529229

Property Type	Number
Application Number:	12529231
Application Number:	12545420
Application Number:	12995751
Application Number:	13955846
Application Number:	13260109
Application Number:	13147594
Application Number:	15602045
Application Number:	12551093
Application Number:	12568584
Application Number:	13853682
Application Number:	12567684
Application Number:	14024015
Application Number:	14311443
Application Number:	12569480
Application Number:	13837956
Application Number:	13394764
Application Number:	13257791
Application Number:	14602378
Application Number:	13322335
Application Number:	13502011
Application Number:	13978700
Application Number:	13290146
Application Number:	14803074
Application Number:	15197458
Application Number:	13980573
Application Number:	12440150
Application Number:	14692318
Application Number:	12515248
Application Number:	12445261
Application Number:	12520966
Application Number:	13269974
Application Number:	12666222
Application Number:	14221481
Application Number:	15495741
Application Number:	12895568
Application Number:	13466554
Application Number:	13548226
Application Number:	14110743

Property Type	Number
Application Number:	14115085
Application Number:	15189297
Application Number:	12727062
Application Number:	12813724
Application Number:	13256635
Application Number:	13265229
Application Number:	12510040
Application Number:	14058147
Application Number:	12368516
Application Number:	12420714
Application Number:	12422683
Application Number:	12485828
Application Number:	12422138
Application Number:	12396039
Application Number:	12479438
Application Number:	13653215
Application Number:	12511424
Application Number:	14166802
Application Number:	12490293
Application Number:	12649013
Application Number:	12512635
Application Number:	12512792
Application Number:	12389909
Application Number:	12421949
Application Number:	12418681
Application Number:	12479574
Application Number:	12511814
Application Number:	12422677
Application Number:	12485814
Application Number:	13592261
Application Number:	12365800
Application Number:	12253825
Application Number:	12430788
Application Number:	12420724
Application Number:	12365812
Application Number:	12723578
Application Number:	13257305
Application Number:	12626077

Property Type	Number
Application Number:	13920814
Application Number:	13121346
Application Number:	12996772
Application Number:	13172741
Application Number:	14322883
Application Number:	13819267
Application Number:	13297101
Application Number:	14345211
Application Number:	13661017
Application Number:	13882687
Application Number:	14349313
Application Number:	13981080
Application Number:	13881147
Application Number:	14342191
Application Number:	13814918
Application Number:	14110708
Application Number:	14364656
Application Number:	15038974
Application Number:	14353266
Application Number:	14917621
Application Number:	14436047
Application Number:	13148208
Application Number:	13492011
Application Number:	12474550
Application Number:	12628064
Application Number:	13915195
Application Number:	12720952
Application Number:	13209073
Application Number:	14856146
Application Number:	12466759
Application Number:	13407456
Application Number:	12993333
Application Number:	13101087
Application Number:	13505715
Application Number:	13146308
Application Number:	14427037
Application Number:	13814710
Application Number:	14779172

Property Type	Number
Application Number:	12665431
Application Number:	12845360
Application Number:	15052345
Application Number:	13082102
Application Number:	13812058
Application Number:	13812089
Application Number:	14122229
Application Number:	15054162
Application Number:	14115093
Application Number:	15422456
Application Number:	15027644
Application Number:	14492748
Application Number:	14492811
Application Number:	13808910
Application Number:	13579468
Application Number:	12634260
Application Number:	12627737
Application Number:	13375135
Application Number:	12726945
Application Number:	13381977
Application Number:	13030899
Application Number:	13320748
Application Number:	13320368
Application Number:	13266128
Application Number:	13389562
Application Number:	14054370
Application Number:	12201448
Application Number:	13224238
Application Number:	12199685
Application Number:	13488177
Application Number:	12202000
Application Number:	13291935
Application Number:	12199748
Application Number:	12201990
Application Number:	12713401
Application Number:	12707498
Application Number:	12683238
Application Number:	13629975

Property Type	Number
Application Number:	12713443
Application Number:	12606824
Application Number:	12468329
Application Number:	13554182
Application Number:	12550547
Application Number:	13151080
Application Number:	12548959
Application Number:	13246593
Application Number:	12500946
Application Number:	13407488
Application Number:	12549012
Application Number:	14054676
Application Number:	12650058
Application Number:	12650175
Application Number:	14559558
Application Number:	12650225
Application Number:	14027049
Application Number:	12540875
Application Number:	12645219
Application Number:	12500904
Application Number:	12762183
Application Number:	14260088
Application Number:	12579128
Application Number:	12642556
Application Number:	12468300
Application Number:	13559640
Application Number:	12507718
Application Number:	14054679
Application Number:	12648110
Application Number:	14813687
Application Number:	12620761
Application Number:	13495266
Application Number:	12633596
Application Number:	12604290
Application Number:	13867906
Application Number:	12665322
Application Number:	12665636
Application Number:	12262644

Property Type	Number
Application Number:	12629636
Application Number:	12770281
Application Number:	13321936
Application Number:	12716803
Application Number:	14197414
Application Number:	13124357
Application Number:	12881700
Application Number:	14235603
Application Number:	13078154
Application Number:	13552417
Application Number:	14124243
Application Number:	13489876
Application Number:	15156709
Application Number:	15046031
Application Number:	13597323
Application Number:	12568000
Application Number:	13678920
Application Number:	12629187
Application Number:	13788416
Application Number:	12646681
Application Number:	12648297
Application Number:	13897251
Application Number:	12647255
Application Number:	12962174
Application Number:	13039737
Application Number:	13133637
Application Number:	15019408
Application Number:	13580621
Application Number:	13703133
Application Number:	14110614
Application Number:	15023068
Application Number:	15021133
Application Number:	15923512
Application Number:	14890683
Application Number:	13265480
Application Number:	13809494
Application Number:	13809328
Application Number:	13178361

Property Type	Number
Application Number:	14049417
Application Number:	15063829
Application Number:	12854116
Application Number:	13265325
Application Number:	12647072
Application Number:	13564547
Application Number:	12639403
Application Number:	12638167
Application Number:	12636370
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Application Number:	12620110
Application Number:	12487313
Application Number:	13652269
Application Number:	12645709
Application Number:	12726960
Application Number:	12521114

CORRESPONDENCE DATA**Fax Number:** (650)838-2001***Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*****Phone:** 650-838-2000**Email:** tami.tucker@alston.com**Correspondent Name:** MICHELE GLESSNER**Address Line 1:** ALSTON & BIRD LLP**Address Line 2:** 101 SOUTH TRYON STREET, SUITE 4000**Address Line 4:** CHARLOTTE, NORTH CAROLINA 28280-4000

ATTORNEY DOCKET NUMBER:	061718/524082 7824
NAME OF SUBMITTER:	MICHELE GLESSNER
SIGNATURE:	/Michele Glessner/
DATE SIGNED:	01/29/2019

Total Attachments: 131

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PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (this “Patent Security Agreement”) is made as of this 28 day of December, 2018, by and among Grantors listed on the signature pages hereof (collectively, jointly and severally, “Grantors” and each individually “Grantor”), and CRESTLINE DIRECT FINANCE, L.P., in its capacity as Collateral Agent for the Secured Parties (in such capacity, together with its successors, the “Collateral Agent”).

W I T N E S S E T H:

WHEREAS, pursuant to that certain Credit and Guaranty Agreement, dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), by and among INVENTION HOLDING COMPANY, LLC, a Delaware limited liability company, ALLIED INVENTORS, LLC, a Delaware limited liability company (“Borrower” and CERTAIN SUBSIDIARIES OF BORROWER, as Guarantors, the Lenders party thereto from time to time (collectively, the “Lenders”), the Collateral Agent and CRESTLINE DIRECT FINANCE, L.P., as Administrative Agent and Sole Lead Arranger, the Secured Parties have agreed to make certain financial accommodations available to Company from time to time pursuant to the terms and conditions thereof;

WHEREAS, the Secured Parties are willing to make the financial accommodations to Company as provided for in the Credit Agreement, but only upon the condition, among others, that Grantors shall have executed and delivered to the Collateral Agent, for the benefit of the Secured Parties, that certain Pledge and Security Agreement dated as of December 28, 2018, by and among the Grantors, the other Grantors party thereto and the Collateral Agent (as amended, restated, supplemented or otherwise modified from time to time, the “Security Agreement”); and

WHEREAS, pursuant to the Security Agreement, Grantors are required to execute and deliver to the Collateral Agent, for the benefit of the Secured Parties, this Patent Security Agreement.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Grantor hereby agrees as follows:

1. **DEFINED TERMS.** All capitalized terms used but not otherwise defined herein have the meanings given to them in the Security Agreement or, if not defined therein, in the Credit Agreement.

2. **GRANT OF SECURITY INTEREST IN PATENT COLLATERAL.** Each Grantor hereby grants to the Collateral Agent, for the benefit of the Secured Parties, a continuing First Priority security interest in all of such Grantor’s right, title and interest in, to and under the following, whether presently existing or hereafter created or acquired (collectively, the “Patent Collateral”):

(a) all of its Patents, including those referred to on Schedule I hereto, and Patent Licenses, including those referred to on Schedule II hereto;

(b) all reissues, continuations or extensions of the foregoing;

(c) all products and Proceeds of the foregoing, including any claim by such Grantor against third parties for past, present or future (i) infringement or dilution of any Patent or Patent License or (ii) injury to the goodwill associated with any Patent or Patent License.

3. **SECURITY FOR OBLIGATIONS.** This Patent Security Agreement and the Lien created hereby secures the payment and performance of all the Secured Obligations, whether now existing or arising hereafter. Without limiting the generality of the foregoing, this Patent Security Agreement secures the payment of all amounts which constitute part of the Obligations and would be owed by Grantors, or any of them, to the Collateral Agent, the other Secured Parties or any of them, whether or not they are unenforceable or not allowable due to the filing of a petition in bankruptcy with respect to any Grantor.

4. **SECURITY AGREEMENT.** The security interests granted pursuant to this Patent Security Agreement are granted in conjunction with the security interests granted to the Collateral Agent, for the benefit of the Secured Parties, pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

5. **AUTHORIZATION TO SUPPLEMENT.** If any Grantor shall obtain rights to any new Patents or Patent Licenses, the provisions of this Patent Security Agreement shall automatically apply thereto. Grantors hereby authorize the Collateral Agent unilaterally to modify this Agreement by amending Schedule I or Schedule II, as applicable, to include any such new rights of Grantors. Notwithstanding the foregoing, no failure to so modify this Patent Security Agreement or amend Schedule I or Schedule II, as the case may be, shall in any way affect, invalidate or detract from the Collateral Agent's continuing security interest in all Patent Collateral, whether or not listed on Schedule I or Schedule II, as applicable.

6. **COUNTERPARTS.** This Patent Security Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such separate counterparts shall together constitute but one and the same instrument. In proving this Patent Security Agreement in any judicial proceedings, it shall not be necessary to produce or account for more than one such counterpart signed by the party against whom such enforcement is sought. Any signatures delivered by a party by facsimile or other electronic method of transmission shall be deemed an original signature hereto.

7. **CONSTRUCTION.** Unless the context of this Patent Security Agreement clearly requires otherwise, references to the plural include the singular, references to the singular include the plural, the terms "includes" and "including" are not limiting, and the term "or" has, except where otherwise indicated, the inclusive meaning represented by the phrase "and/or." The words "hereof", "herein", "hereby", "hereunder" and similar terms in this Patent Security Agreement refer to this Patent Security Agreement as a whole and not to any particular provision of this Patent Security Agreement. Section, Schedule, and Exhibit references herein are to this Patent Security Agreement unless otherwise specified.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, each Grantor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

[signature on following page]

Signature Page to Patent Security Agreement

EMPIRE TECHNOLOGY DEVELOPMENT LLC

By: Allied Inventors, LLC its sole member

By: Allied Inventors Management, LLC, its
Manager

By: 

Name: Thomas C. Karr
Title: CEO

SCHEDULE I
PATENTS

Attached.

SCHEDULE I TO PATENT SECURITY AGREEMENT

PATENT
REEL: 048373 FRAME: 0299
COBB_029390

Grantor	Country	Patent	Application Number	Application Filing Date	Status
Empire Technology Development LLC	United States of America	8978322	12/886370	Sep 20, 2010 Issued	
Empire Technology Development LLC	Australia	2013231094	2013231094	Feb 25, 2010 Issued	
Empire Technology Development LLC	Australia	2010200700	2010200700	Feb 25, 2010 Issued	
Empire Technology Development LLC	Australia	2010200965	2010200965	Mar 12, 2010 Issued	
Empire Technology Development LLC	United States of America	8955546	12/886403	Sep 20, 2010 Issued	
Empire Technology Development LLC	United States of America	9228025	13/695276	Oct 29, 2012 Issued	
Empire Technology Development LLC	United States of America	9267873	13/376544	Dec 6, 2011 Issued	
Empire Technology Development LLC	United States of America	8946958	13/321784	Nov 21, 2011 Issued	
Empire Technology Development LLC	United States of America	8920902	13/256215	Sep 12, 2011 Issued	
Empire Technology Development LLC	Australia	2011370979	2011370979	Jun 14, 2011 Issued	
Empire Technology Development LLC	China	5749852	2014-501051	Mar 24, 2011 Issued	
Empire Technology Development LLC	United States of America	9742842	13/511134	May 21, 2012 Issued	
Empire Technology Development LLC	Republic of Korea	10-1589801	10-2013-7031995	Sep 20, 2011 Issued	
Empire Technology Development LLC	China	ZL201180073489.X	201180073489.X	Sep 20, 2011 Issued	
Empire Technology Development LLC	United States of America	1059032	13/982251	Aug 18, 2017 Published	
Empire Technology Development LLC	United States of America	8904851	13/696689	Jul 26, 2013 Issued	
Empire Technology Development LLC	China	ZL201180075390.3	201180075390.3	Nov 7, 2012 Issued	
Empire Technology Development LLC	Japan	5965494	2014-545874	Dec 19, 2011 Issued	
Empire Technology Development LLC	United States of America	9039803	13/699193	Dec 19, 2011 Issued	
Empire Technology Development LLC	Australia	2012372793	2012372793	Nov 20, 2012 Issued	
Empire Technology Development LLC	China	ZL201280072994.7	201280072994.7	Mar 7, 2012 Issued	
Empire Technology Development LLC	United States of America	8987428	13/698776	Nov 19, 2012 Issued	
Empire Technology Development LLC	United States of America	9790248	14/626591	Feb 19, 2015 Issued	
Empire Technology Development LLC	United States of America	9006369	13/814866	Feb 7, 2013 Issued	
Empire Technology Development LLC	United States of America	9157359	13/976440	Jun 26, 2013 Issued	
Empire Technology Development LLC	United States of America	8920932	13/814844	Feb 7, 2013 Issued	
Empire Technology Development LLC	China	ZL201280075898.8	201280075898.8	Jul 19, 2012 Issued	
Empire Technology Development LLC	Germany	112012006712	112012006712.6	Jul 19, 2012 Issued	
Empire Technology Development LLC	United States of America	9725867	14/375115	Sep 24, 2014 Issued	
Empire Technology Development LLC	United States of America	9370321	13/993908	Jun 13, 2013 Issued	
Empire Technology Development LLC	United States of America	9111154	13/811548	Jan 22, 2013 Issued	
Empire Technology Development LLC	United States of America	8911858	13/879289	Apr 12, 2013 Issued	

**PATENT
REEL: 048373 FRAME: 0300**

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Empire Technology Development LLC	United States of America	9221960	14/548223	Nov 19, 2014 Issued
Empire Technology Development LLC	China	ZL201280076688.0	201280076688.0	Oct 31, 2012 Issued
Empire Technology Development LLC	United States of America	9745699	14/440923	May 6, 2015 Issued
Empire Technology Development LLC	United States of America	9907540	14/362907	Jun 4, 2014 Issued
Empire Technology Development LLC	United States of America	9417122	13/879800	Apr 16, 2013 Issued
Empire Technology Development LLC	United States of America	9057677	13/825052	Mar 19, 2013 Issued
Empire Technology Development LLC	United States of America	9269034	13/816574	Feb 12, 2013 Issued
Empire Technology Development LLC	United States of America	14/09,763	2013800755804	Oct 3, 2013 Published
Empire Technology Development LLC	China	9834522	14/768217	Feb 15, 2013 Allowed
Empire Technology Development LLC	United States of America	9890130	14/768218	Aug 15, 2015 Issued
Empire Technology Development LLC	United States of America	15/584,363	Aug 15, 2015 Issued	
Empire Technology Development LLC	United States of America	15/584,518	May 2, 2017 Marked for Impairing	
Empire Technology Development LLC	United States of America	1040007	14/648460	May 29, 2015 Issued
Empire Technology Development LLC	United States of America	14/7770,580	Aug 26, 2015 Marked for Impairing	
Empire Technology Development LLC	United States of America	9663605	13/825858	Mar 25, 2013 Issued
Empire Technology Development LLC	United States of America	14/785,566	Oct 19, 2015 Marked for Impairing	
Empire Technology Development LLC	European Patent Office	13882133.5	Apr 18, 2013 Marked for Impairing	
Empire Technology Development LLC	United States of America	9918466	14/760740	Jul 14, 2015 Issued
Empire Technology Development LLC	United States of America	9893287	14/651841	Jun 12, 2015 Issued
Empire Technology Development LLC	United States of America	9493275	13/876016	Mar 26, 2013 Issued
Empire Technology Development LLC	European Patent Office	13886810.4	Jun 13, 2013 Allowed	
Empire Technology Development LLC	United States of America	9868683	14/898420	Dec 14, 2015 Issued
Empire Technology Development LLC	China	ZL 2013800785176	201380078517.6	Jun 13, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1806862	10-2016-7000891	Jun 13, 2013 Issued
Empire Technology Development LLC	India	7872/CHENP/2015	Jun 13, 2013 Published	
Empire Technology Development LLC	United States of America	9428666	14/778977	Apr 22, 2016 Allowed
Empire Technology Development LLC	United States of America	15/031,710	Sep 21, 2015 Issued	
Empire Technology Development LLC	China	ZL201380076737.5	201380076737.5	Mar 22, 2013 Issued
Empire Technology Development LLC	India	6408/CHENP/2015	Mar 22, 2013 Published	
Empire Technology Development LLC	United States of America	9932319	14/894616	Nov 30, 2015 Issued
Empire Technology Development LLC	European Patent Office	3004070	13885964.0	May 28, 2013 Issued
Empire Technology Development LLC	United Kingdom	3004070	13885964.0	May 28, 2013 Issued
Empire Technology Development LLC	France	3004070	13885964.0	May 28, 2013 Issued
Empire Technology Development LLC	Germany	3004070	602013027979.9	May 28, 2013 Issued
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Empire Technology Development LLC	France	2730114	11869165.8	Jul 6, 2011 Issued
Empire Technology Development LLC	Germany	2730114	602011052287.6	Jul 6, 2011 Issued
Empire Technology Development LLC	United Kingdom	2730114	11869165.8	Jul 6, 2011 Issued
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Empire Technology Development LLC	China	ZL201180072100.X	201180072100.X	Aug 2, 2012 Issued
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Empire Technology Development LLC	United States of America		9382143	14/241004
Empire Technology Development LLC	United States of America		8835643	13/878947
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Empire Technology Development LLC	Republic of Korea	10-1566467	10-2014-7011826	Nov 2, 2011 Issued
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Empire Technology Development LLC	European Patent Office	2732667	11869237.5	Jul 13, 2011 Issued
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Empire Technology Development LLC	Republic of Korea	10-1625108	10-2014-7003289	Jul 13, 2011 Issued
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Empire Technology Development LLC	United States of America	14/007,324	13/499746	Sep 24, 2013 Published
Empire Technology Development LLC	United States of America	8694023	13/637322	Sep 25, 2012 Issued
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Empire Technology Development LLC	Japan	5781242	2014-555911	Feb 6, 2012 Issued
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Empire Technology Development LLC	United States of America	9003502 13/819715	Mar 3, 2017 Published
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Empire Technology Development LLC	China	ZL201280075352.2 201280075352.2	Aug 16, 2012 Issued
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Empire Technology Development LLC	Germany	112013006745.5	Feb 28, 2013 Published	
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Empire Technology Development LLC	United States of America	15/924,535	Mar 19, 2018 Pending	
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Empire Technology Development LLC	United States of America	9330359	14/122971	Nov 27, 2013 Issued
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Empire Technology Development LLC	United States of America	14/647,603	May 27, 2015 Marked for Impairing	

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Empire Technology Development LLC	United States of America	9684672	14/358770	May 16, 2014 Issued
Empire Technology Development LLC	United States of America	9760876	13/855590	Apr 2, 2013 Issued
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Empire Technology Development LLC	United States of America	15/657,465		Jul 24, 2017 Published
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Empire Technology Development LLC	United States of America	9280792	14/006310	Sep 19, 2013 Issued
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Empire Technology Development LLC	China	201380080230.7	Sep 3, 2014 Issued
Empire Technology Development LLC	European Patent Office	13895736.0	Oct 16, 2013 Published
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Empire Technology Development LLC	United States of America	15/299,840	Dec 19, 2014 Issued
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Empire Technology Development LLC	United States of America	15/507,389	Sep 23, 2016 Published
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Empire Technology Development LLC	China	201380080250.4	Oct 16, 2013 Published
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Empire Technology Development LLC	China	201380080949.0	Nov 14, 2013 Allowed
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Empire Technology Development LLC	Republic of Korea	10-1804082	Dec 12, 2013 Issued
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Empire Technology Development LLC	China	201480081349.0	Aug 19, 2014 Published
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Empire Technology Development LLC	United States of America	9408243	14/408135	Jun 19, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1786541	10-2015-7035401	Dec 15, 2014 Issued
Empire Technology Development LLC	United States of America	9713186	15/200648	May 13, 2013 Issued
Empire Technology Development LLC	China		201380078336.3	Jul 1, 2016 Issued
Empire Technology Development LLC	United States of America	9817626	14/352266	Jul 25, 2013 Allowed
Empire Technology Development LLC	United States of America	9699243	14/342377	Apr 16, 2014 Issued
Empire Technology Development LLC	United States of America		15/626,231	Mar 1, 2014 Issued
Empire Technology Development LLC	United States of America	9350909	13/978850	Jun 19, 2017 Published
Empire Technology Development LLC	United States of America		15/098,740	Jul 9, 2013 Issued
Empire Technology Development LLC	United States of America	10079743	14/008377	Apr 14, 2016 Published
Empire Technology Development LLC	Taiwan R.O.C.	1556601	10311101	Sep 27, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1737777	10-2015-7034682	Mar 25, 2014 Issued
Empire Technology Development LLC	United States of America	9390682	14/232172	May 6, 2013 Issued
Empire Technology Development LLC	United States of America		9998411 13/981544	Jan 10, 2014 Issued
Empire Technology Development LLC	United States of America	9846661	14/3333943	Jul 24, 2013 Issued
Empire Technology Development LLC	China	2015104244743	201510424474.3	Jul 17, 2014 Issued
Empire Technology Development LLC	United States of America		9898195 14/371706	Jul 17, 2015 Issued
Empire Technology Development LLC	United States of America	9965626	14/370399	Jul 10, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1723100	10-2016-7003975	Jul 2, 2014 Issued
Empire Technology Development LLC	United States of America		15/973,455	Jul 18, 2013 Issued
Empire Technology Development LLC	United States of America	15/477,784		May 7, 2018 Published
Empire Technology Development LLC	United States of America	9626773	14/358056	Apr 3, 2017 Allowed
Empire Technology Development LLC	Republic of Korea	10-1753200	10-2016-7007249	May 14, 2014 Issued
Empire Technology Development LLC	United States of America	9232563	14/118649	Sep 9, 2013 Issued
Empire Technology Development LLC	United States of America		15/843,174	Nov 19, 2013 Issued
Empire Technology Development LLC	United States of America	9852634	14/372104	Dec 15, 2017 Allowed
Empire Technology Development LLC	Republic of Korea		10-2016-7010751	Jul 14, 2014 Issued
Empire Technology Development LLC	United States of America	14/234,309		Oct 25, 2013 Marked for Impairing
Empire Technology Development LLC	Republic of Korea	10-2016-7006773		Jan 22, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9946040	15/112165	Aug 22, 2013 Marked for Impairing
Empire Technology Development LLC	United States of America			Jul 15, 2016 Issued

Empire Technology Development LLC	United States of America	9743250	14/343653	Mar 7, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1788274	10-2014-7023780	Oct 28, 2013 Issued
Empire Technology Development LLC	Japan	6280570	2015-557998	Oct 28, 2013 Issued
Empire Technology Development LLC	Japan		2018-006867	Oct 28, 2013 Pending
Empire Technology Development LLC	European Patent Office		13896373.1	Oct 28, 2013 Published
Empire Technology Development LLC	United States of America	9338761	14/382662	Sep 3, 2014 Issued
Empire Technology Development LLC	United States of America	9769311	15/092773	Apr 7, 2016 Issued
Empire Technology Development LLC	United States of America	1003687	15/705726	Sep 15, 2017 Issued
Empire Technology Development LLC	United States of America		15/953,229	Apr 13, 2018 Published
Empire Technology Development LLC	United States of America	10123126	15/114411	Jul 27, 2016 Issued
Empire Technology Development LLC	United States of America	9913048	15/117165	Aug 5, 2016 Issued
Empire Technology Development LLC	United States of America		15/115,273	Jul 29, 2016 Allowed
Empire Technology Development LLC	United States of America	9778366	14/378184	Aug 12, 2014 Issued
Empire Technology Development LLC	United States of America	14/384,887		Sep 12, 2014 Allowed
Empire Technology Development LLC	United States of America	6205498	2016-545308	Jan 31, 2014 Issued
Empire Technology Development LLC	European Patent Office		14881088.0	Jan 31, 2014 Published
Empire Technology Development LLC	United States of America	15/117,169		Aug 5, 2016 Published
Empire Technology Development LLC	United States of America	9785257	14/916546	Mar 3, 2016 Issued
Empire Technology Development LLC	United States of America	9990058	15/726570	Oct 6, 2017 Issued
Empire Technology Development LLC	United States of America		15/804,283	Nov 6, 2017 Marked for Impairing
Empire Technology Development LLC	United States of America	9810783	14/278802	May 15, 2014 Issued
Empire Technology Development LLC	United States of America		10-2016-7030167	Apr 9, 2014 Allowed
Empire Technology Development LLC	United States of America	9764712	15/117375	Aug 8, 2016 Issued
Empire Technology Development LLC	United States of America	10005427	15/707436	Sep 18, 2017 Issued
Empire Technology Development LLC	United States of America		15/991,734	May 29, 2018 Published
Empire Technology Development LLC	United States of America	9953462	14/384825	Sep 12, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1827550	10-2016-7022752	Jan 31, 2014 Issued
Empire Technology Development LLC	European Patent Office		14880509.6	Jan 31, 2014 Published
Empire Technology Development LLC	United States of America	6334715	9990772 14/384870	Sep 12, 2014 Issued
Empire Technology Development LLC	Japan		2016-547936	Jan 31, 2014 Issued
Empire Technology Development LLC	European Patent Office		14881231.6	Jan 31, 2014 Published
Empire Technology Development LLC	United States of America	10147293	14/425591	Mar 3, 2015 Issued
Empire Technology Development LLC	United States of America	9471129	14/454121	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	9747924	14/440236	May 1, 2015 Issued
Empire Technology Development LLC	United States of America	9984703	15/684369	Aug 23, 2017 Issued
Empire Technology Development LLC	United States of America	9232476	14/301554	Jun 11, 2014 Issued

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Empire Technology Development LLC	United States of America	9485736 14/955199	Dec 1, 2015 Issued
Empire Technology Development LLC	United States of America	9900841 15/277678	Sep 27, 2016 Issued
Empire Technology Development LLC	United States of America	15/864,657	Jan 8, 2018 Published
Empire Technology Development LLC	United States of America	9937666 14/296380	Jun 4, 2014 Issued
Empire Technology Development LLC	United States of America	15/934,891	Mar 23, 2018 Published
Empire Technology Development LLC	United States of America	9865088 14/384917	Sep 12, 2014 Issued
Empire Technology Development LLC	United States of America	10-1821982	Oct 2016-7021280
Empire Technology Development LLC	United States of America	3100240	14880818.1
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Empire Technology Development LLC	Germany	9424181 14/305691	May 26, 2015 Marked for Impairing
Empire Technology Development LLC	Republic of Korea	10-2015-0072691	Aug 11, 2015 Issued
Empire Technology Development LLC	China	2015104898193	Aug 11, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9858811 14/518144	Oct 20, 2014 Issued
Empire Technology Development LLC	United States of America	10-1820575	Oct 16, 2015 Issued
Empire Technology Development LLC	United States of America	14/456,107	Oct 16, 2015 Issued
Empire Technology Development LLC	United States of America	201510563406.5	Sep 7, 2015 Allowed
Empire Technology Development LLC	United States of America	9432380 14/492938	Sep 22, 2014 Issued
Empire Technology Development LLC	United States of America	10-1723098	Sep 17, 2015 Issued
Empire Technology Development LLC	United States of America	9689695 14/491937	Sep 19, 2014 Issued
Empire Technology Development LLC	United States of America	15/622,385	Jun 14, 2017 Published
Empire Technology Development LLC	United States of America	9553882 14/480041	Sep 8, 2014 Issued
Empire Technology Development LLC	Japan	6081540	Aug 13, 2015 Issued
Empire Technology Development LLC	United States of America	9836650 14/617165	Feb 9, 2015 Issued
Empire Technology Development LLC	Japan	6050904	Feb 2, 2016 Issued
Empire Technology Development LLC	United States of America	2016-017655	Apr 7, 2015 Published
Empire Technology Development LLC	United States of America	14/434,062	Oct 29, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	14/787,849	Jul 16, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	14/761,389	Aug 29, 2008 Issued
Empire Technology Development LLC	India	278292	Aug 14, 2009 Issued
Empire Technology Development LLC	United States of America	8510241 12/541171	Aug 31, 2009 Issued
Empire Technology Development LLC	United States of America	8788622 12/551175	Jun 15, 2010 Issued
Empire Technology Development LLC	China	ZL201080023897.X	Jul 8, 2014 Issued
Empire Technology Development LLC	United States of America	9268752 14/325501	Jan 11, 2016 Published
Empire Technology Development LLC	United States of America	14/992,147	Jul 21, 2009 Issued

Empire Technology Development LLC	India	2055/DEL/2008	Aug 29, 2008 Published
Empire Technology Development LLC	United States of America	8310367 12/551164	Aug 31, 2009 Issued
Empire Technology Development LLC	India	2118/CHE/2008	Aug 29, 2008 Published
Empire Technology Development LLC	India	2123/CHE/2008	Aug 29, 2008 Issued
Empire Technology Development LLC	United States of America	8290924 12/504684	Jul 17, 2009 Issued
Empire Technology Development LLC	United States of America	8296850 12/195786	Aug 21, 2008 Issued
Empire Technology Development LLC	India	1304/DEL/2008	May 28, 2008 Published
Empire Technology Development LLC	United States of America	8656176 12/257140	Oct 23, 2008 Issued
Empire Technology Development LLC	United States of America	9972008 14/100296	Dec 9, 2013 Issued
Empire Technology Development LLC	India	2131/CHE/2008	Sep 1, 2008 Published
Empire Technology Development LLC	United States of America	8248038 12/550197	Aug 28, 2009 Issued
Empire Technology Development LLC	China	ZL201080031906.X	Aug 26, 2010 Issued
Empire Technology Development LLC	United States of America	8889394 12/554949	Sep 7, 2009 Issued
Empire Technology Development LLC	United States of America	8587222 12/550473	Aug 31, 2009 Issued
Empire Technology Development LLC	United States of America	8476794 12/551065	Aug 31, 2009 Issued
Empire Technology Development LLC	United States of America	8351017 12/648081	Dec 28, 2009 Issued
Empire Technology Development LLC	China	ZL201080044704.9	Aug 9, 2010 Issued
Empire Technology Development LLC	Japan	5524337	2012-526133
Empire Technology Development LLC	United States of America	8508674 13/709670	Aug 9, 2010 Issued
Empire Technology Development LLC	United States of America	8255574 12/550697	Aug 31, 2009 Issued
Empire Technology Development LLC	European Patent Office	2433222	10777441.6
Empire Technology Development LLC	United Kingdom	2433222	10777441.6
Empire Technology Development LLC	France	2433222	10777441.6
Empire Technology Development LLC	Germany	2433222	602010045404.5
Empire Technology Development LLC	India	1157/CHE/2009	May 20, 2009 Published
Empire Technology Development LLC	United States of America	8946112 12/638154	Dec 15, 2009 Issued
Empire Technology Development LLC	China	ZL201080048949.9	Sep 9, 2010 Issued
Empire Technology Development LLC	Japan	5398918	Sep 9, 2010 Issued
Empire Technology Development LLC	United States of America	9474996 14/577932	Sep 9, 2010 Issued
Empire Technology Development LLC	European Patent Office	10826202.3	Sep 9, 2010 Published
Empire Technology Development LLC	United States of America	8951783 13/254153	Aug 31, 2011 Issued
Empire Technology Development LLC	China	ZL201080065927.3	Sep 9, 2010 Issued
Empire Technology Development LLC	China	5632529	Nov 23, 2010 Issued
Empire Technology Development LLC	Japan	8287719 12/750304	Mar 30, 2010 Issued
Empire Technology Development LLC	United States of America	9513299 13/619620	Sep 14, 2012 Issued
Empire Technology Development LLC	India	118/KOL/2010	Feb 9, 2010 Published

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Empire Technology Development LLC	United States of America	9739512	13/102896	May 6, 2011 Issued
Empire Technology Development LLC	United States of America	8879240	13/130842	May 24, 2011 Issued
Empire Technology Development LLC	India	8317917	13/390580	Feb 15, 2012 Issued
Empire Technology Development LLC	European Patent Office		2074/CHE/2010	Jul 20, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8863996	13/395839	Oct 19, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8845792	13/263998	Mar 13, 2012 Issued
Empire Technology Development LLC	China	ZL201180054993.5	201180054993.5	Oct 12, 2011 Issued
Empire Technology Development LLC	United States of America	9063074	13/202269	Jan 12, 2011 Issued
Empire Technology Development LLC	China	ZL201180072274.6	201180072274.6	Aug 18, 2011 Issued
Empire Technology Development LLC	Japan	5820073	2014-525501	Dec 23, 2013 Issued
Empire Technology Development LLC	United States of America	9739934	14/590758	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	9225043	13/147926	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	9324997	14/946216	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	9602445	13/582831	Jan 6, 2015 Issued
Empire Technology Development LLC	United States of America	9967215	15/463203	Aug 4, 2011 Issued
Empire Technology Development LLC	United States of America	8457885	13/498556	Nov 19, 2015 Issued
Empire Technology Development LLC	United States of America	8560238	13/859665	Sep 5, 2012 Issued
Empire Technology Development LLC	China	ZL2011800666595.5	2011800666595.5	Mar 20, 2017 Issued
Empire Technology Development LLC	India	8731833	13/949125	Mar 27, 2012 Issued
Empire Technology Development LLC	China	0296/CHE/2011		Apr 9, 2013 Issued
Empire Technology Development LLC	Republic of Korea	201510934136.4		Jun 16, 2011 Issued
Empire Technology Development LLC	United States of America	9275404	10-2017-7015524	Jul 23, 2013 Issued
Empire Technology Development LLC	United States of America	13/497494		Feb 1, 2011 Published
Empire Technology Development LLC	China	201180070175.4		Jun 16, 2011 Marked for Impairing
Empire Technology Development LLC	Japan	5914634	2014-504400	Jun 16, 2011 Published
Empire Technology Development LLC	United States of America	9060191	13/378993	Jun 16, 2011 Marked for Impairing
Empire Technology Development LLC	China	ZL201180071732.4	201180071732.4	Jun 13, 2011 Issued
Empire Technology Development LLC	European Patent Office	2700267	11863999.6	Jun 13, 2011 Issued
Empire Technology Development LLC	Japan	5883500	2014-505732	Dec 16, 2011 Issued
Empire Technology Development LLC	Germany	2700267	602011035320.9	Jun 20, 2011 Issued
Empire Technology Development LLC	France	2700267	11863999.6	Jun 20, 2011 Issued
Empire Technology Development LLC	United Kingdom	2700267	11863999.6	Jun 20, 2011 Issued
Empire Technology Development LLC	India	1369/CHE/2011		Apr 20, 2011 Published

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Empire Technology Development LLC	United States of America	9037164	13/643957	Oct 26, 2012 Issued
Empire Technology Development LLC	China	ZL201180074267.X	201180074267.X	Dec 5, 2011 Issued
Empire Technology Development LLC	Japan	5847951	2014-536343	Dec 5, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1632648	10-2014-7013090	Dec 5, 2011 Issued
Empire Technology Development LLC	European Patent Office		11874276,6	Dec 5, 2011 Marked for Impairing
Empire Technology Development LLC	United States of America	9055396	13//00393	Nov 27, 2012 Issued
Empire Technology Development LLC	United States of America	9288634	14/717644	May 20, 2015 Issued
Empire Technology Development LLC	United States of America	9712979	15/008143	Jan 27, 2016 Issued
Empire Technology Development LLC	India	0914/CHE/2012		Mar 13, 2012 Published
Empire Technology Development LLC	United States of America	9422165	14/397302	Oct 27, 2014 Issued
Empire Technology Development LLC	India	1665/CHE/2012		Apr 27, 2012 Published
Empire Technology Development LLC	United States of America	9416311	14/399277	Nov 6, 2014 Issued
Empire Technology Development LLC	China	ZL201280073041.2	201280073041.2	Nov 26, 2012 Issued
Empire Technology Development LLC	European Patent Office		12876127.7	Nov 26, 2012 Marked for Impairing
Empire Technology Development LLC	United States of America	9313083	13/576339	Jul 31, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1563277	10-2014-7016175	Mar 9, 2012 Issued
Empire Technology Development LLC	Japan	6129865	2014-545389	Mar 9, 2012 Issued
Empire Technology Development LLC	United States of America	9160681	13/641126	Feb 23, 2016 Published
Empire Technology Development LLC	Republic of Korea	10-1558471	10-2014-7021566	Oct 14, 2012 Issued
Empire Technology Development LLC	Japan	6077009	2014-552697	Mar 15, 2012 Issued
Empire Technology Development LLC	United States of America	8949654	13/582741	Sep 4, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1675818	10-2014-7021661	Mar 15, 2012 Issued
Empire Technology Development LLC	Japan	6244309	2014-546660	Mar 15, 2012 Issued
Empire Technology Development LLC	United States of America	9882109	14/440842	May 5, 2015 Issued
Empire Technology Development LLC	United States of America	14/661,888		Mar 18, 2015 Allowed
Empire Technology Development LLC	United States of America	9015859	13/635632	Sep 17, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1570946	10-2014-7012524	Mar 30, 2012 Issued
Empire Technology Development LLC	United States of America	9804896	14/128477	Dec 20, 2013 Issued
Empire Technology Development LLC	United States of America	9940170	13/978949	Jul 10, 2013 Issued
Empire Technology Development LLC	United States of America	15/933,424		Mar 23, 2018 Marked for Impairing
Empire Technology Development LLC	United States of America	9636065	14/350746	Apr 9, 2014 Issued
Empire Technology Development LLC	United States of America	14/409,978		Dec 19, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9987616	14/769819	Aug 23, 2015 Issued
Empire Technology Development LLC	United States of America	9258355	13/822201	Mar 11, 2013 Issued
Empire Technology Development LLC	United States of America	9942306	14/974240	Dec 18, 2015 Issued

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Empire Technology Development LLC	United States of America	14/782,787	Oct 6, 2015 Published
Empire Technology Development LLC	United States of America	9708530 14/402090	Nov 18, 2014 Issued
Empire Technology Development LLC	China	ZL201380067736.4	Oct 28, 2013 Issued
Empire Technology Development LLC	United States of America	9864709 14/383895	Sep 8, 2014 Issued
Empire Technology Development LLC	United States of America	9405691 14/369913	Jun 30, 2014 Issued
Empire Technology Development LLC	China	ZL 2013800772706	Aug 12, 2013 Issued
Empire Technology Development LLC	China	201380077270.6	Dec 4, 2013 Allowed
Empire Technology Development LLC	United States of America	9916086 14/648692	May 29, 2015 Issued
Empire Technology Development LLC	China	201380074974.8	Jun 24, 2013 Allowed
Empire Technology Development LLC	United States of America	9204448 14/123199	Nov 29, 2013 Issued
Empire Technology Development LLC	United States of America	9572165 14/833082	Aug 22, 2015 Issued
Empire Technology Development LLC	United States of America	9785568 14/715114	May 18, 2015 Issued
Empire Technology Development LLC	India	2476/CHE/2014	May 19, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9811469 14/407761	Dec 12, 2014 Issued
Empire Technology Development LLC	India	5851/CHE/2013	Dec 16, 2013 Published
Empire Technology Development LLC	United States of America	9483318 14/371322	Jul 9, 2014 Issued
Empire Technology Development LLC	China	ZL 2014800296117	Mar 18, 2014 Issued
Empire Technology Development LLC	United States of America	14/782,240	Oct 2, 2015 Published
Empire Technology Development LLC	European Patent Office	14779545.4	Mar 18, 2014 Published
Empire Technology Development LLC	United States of America	9706620 14/780996	Sep 28, 2015 Issued
Empire Technology Development LLC	China	ZL201480030663.6	Mar 27, 2014 Issued
Empire Technology Development LLC	United States of America	9320052 14/354112	Apr 24, 2014 Issued
Empire Technology Development LLC	India	1760/CHE/2013	Apr 22, 2013 Published
Empire Technology Development LLC	European Patent Office	13882828.0	Jun 24, 2013 Published
Empire Technology Development LLC	United States of America	9554293 14/354116	Apr 24, 2014 Issued
Empire Technology Development LLC	United States of America	15/345,901	Nov 8, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	14/481,439	Sep 9, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9914647 14/520358	Oct 22, 2014 Issued
Empire Technology Development LLC	United States of America	9834687 14/905815	Jan 17, 2016 Issued
Empire Technology Development LLC	India	3183/CHE/2013	Jul 17, 2013 Published
Empire Technology Development LLC	United States of America	9725332 14/522577	Oct 23, 2014 Issued
Empire Technology Development LLC	United States of America	15/611,886	Jun 2, 2017 Published
Empire Technology Development LLC	United States of America	9534977 14/830547	Aug 19, 2015 Issued
Empire Technology Development LLC	United States of America	9795311 15/355616	Nov 18, 2016 Issued
Empire Technology Development LLC	India	2359/DEL/2014	Aug 20, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9556342 14/549895	Nov 21, 2014 Issued

Empire Technology Development LLC	United States of America	982663	14/640465	Mar 6, 2015 Issued
Empire Technology Development LLC	India	2120/DEL/2014	Jul 26, 2014 Marked for Impairing	
Empire Technology Development LLC	United States of America	14/809,793	Jul 27, 2015 Marked for Impairing	
Empire Technology Development LLC	United States of America	14/924,341	Oct 27, 2015 Allowed	
Empire Technology Development LLC	India	2058/DEL/2015	Jul 7, 2015 Marked for Impairing	
Empire Technology Development LLC	United States of America	9926480	14/524690	Oct 27, 2014 Issued
Empire Technology Development LLC	United States of America	1032014	14/716443	May 19, 2015 Issued
Empire Technology Development LLC	India	2489/CHE/2014	May 19, 2014 Marked for Impairing	
Empire Technology Development LLC	United States of America	14/933,049	Nov 5, 2015 Allowed	
Empire Technology Development LLC	India	5598/CHE/2014	Nov 6, 2014 Marked for Impairing	
Empire Technology Development LLC	United States of America	1035124	14/824754	Aug 12, 2015 Issued
Empire Technology Development LLC	India	3959/CHE/2014	Aug 12, 2014 Marked for Impairing	
Empire Technology Development LLC	United States of America	9621253	14/706926	May 7, 2015 Issued
Empire Technology Development LLC	India	2324/CHE/2014	May 9, 2014 Marked for Impairing	
Empire Technology Development LLC	China	201510232848.1	May 8, 2015 Published	
Empire Technology Development LLC	United States of America	9481622	14/660370	Mar 17, 2015 Issued
Empire Technology Development LLC	United States of America	9932495	14/694250	Apr 23, 2015 Issued
Empire Technology Development LLC	United States of America	10059589	15/3226481	Jan 14, 2017 Issued
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Empire Technology Development LLC	PCT	PCT/B2017/056914	Nov 6, 2017 Published	
Empire Technology Development LLC	PCT	PCT/B2017/056102	Oct 4, 2017 Published	
Empire Technology Development LLC	PCT	PCT/B2017/056174	Oct 6, 2017 Published	
Empire Technology Development LLC	PCT	PCT/B2017/057153	Nov 16, 2017 Published	
Empire Technology Development LLC	United States of America	15/326,482	Jan 14, 2017 Marked for Impairing	
Empire Technology Development LLC	India	3277/DEL/2015	Oct 12, 2015 Published	
Empire Technology Development LLC	United States of America	15/290,161	Oct 11, 2016 Published	
Empire Technology Development LLC	United States of America	8623127	12/666954	Dec 28, 2009 Issued
Empire Technology Development LLC	United States of America	9174366	14/092301	Nov 27, 2013 Issued
Empire Technology Development LLC	United States of America	8409910	12/593574	Sep 28, 2009 Issued
Empire Technology Development LLC	United States of America	9373805	13/793745	Mar 11, 2013 Issued
Empire Technology Development LLC	United States of America	8568862	12/530553	Sep 9, 2009 Issued
Empire Technology Development LLC	United States of America	9200012	14/054673	Oct 15, 2013 Issued
Empire Technology Development LLC	United States of America	8475916	12/597743	Oct 26, 2009 Issued
Empire Technology Development LLC	Japan	5027237	2009-529440	Mar 28, 2008 Issued
Empire Technology Development LLC	United States of America	8104093	12/665613	Dec 18, 2009 Issued
Empire Technology Development LLC	United States of America	8631510	13/314894	Dec 8, 2011 Issued

Empire Technology Development LLC	Japan	4269001	2008-553563	Jul 31, 2008 Issued
Empire Technology Development LLC	United States of America	8623663	12/665710	Dec 18, 2009 Issued
Empire Technology Development LLC	Japan	4269002	2008-553568	Jul 31, 2008 Issued
Empire Technology Development LLC	Japan	4465038	2009-529441	Aug 20, 2008 Issued
Empire Technology Development LLC	Japan	4648473	2009-188110	Aug 14, 2009 Issued
Empire Technology Development LLC	United States of America	8057976	12/544839	Aug 20, 2009 Issued
Empire Technology Development LLC	United States of America	8715530	12/663060	Dec 4, 2009 Issued
Empire Technology Development LLC	United States of America	9580645	14/194312	Feb 28, 2014 Issued
Empire Technology Development LLC	United States of America	8455092	12/663078	Dec 4, 2009 Issued
Empire Technology Development LLC	United States of America	8404078	12/601748	Dec 4, 2009 Issued
Empire Technology Development LLC	United States of America	8597460	13/767094	Feb 14, 2013 Issued
Empire Technology Development LLC	United States of America	8334051	12/601968	Nov 25, 2009 Issued
Empire Technology Development LLC	United States of America	8366867	12/664723	Dec 15, 2009 Issued
Empire Technology Development LLC	United States of America	8449180	12/161760	Jul 22, 2008 Issued
Empire Technology Development LLC	United States of America	9447284	12/598288	Oct 30, 2009 Issued
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Empire Technology Development LLC	United States of America	8592676	12/664242	Dec 11, 2009 Issued
Empire Technology Development LLC	United States of America	8623500	12/665027	Dec 16, 2009 Issued
Empire Technology Development LLC	United States of America	9330807	14/088737	Nov 25, 2013 Issued
Empire Technology Development LLC	United States of America	8658888	12/665298	Dec 17, 2009 Issued
Empire Technology Development LLC	United States of America	12/666,971		Dec 28, 2009 Marked for Impairing
Empire Technology Development LLC	Japan	4402161	2009-082395	Mar 30, 2009 Issued
Empire Technology Development LLC	United States of America	7898591	12/640986	Dec 17, 2009 Issued
Empire Technology Development LLC	Japan	4523063	2009-081715	Mar 30, 2009 Issued
Empire Technology Development LLC	United States of America	8330055	12/642110	Dec 18, 2009 Issued
Empire Technology Development LLC	United States of America	8251885	12/564695	Sep 22, 2009 Issued
Empire Technology Development LLC	Japan	4994401	2009-023379	Feb 4, 2009 Issued
Empire Technology Development LLC	United States of America	8026155	12/641079	Dec 17, 2009 Issued
Empire Technology Development LLC	Japan	4526597	2009-525828	Jan 26, 2009 Issued
Empire Technology Development LLC	Japan	4815496	2009-014258	Jan 26, 2009 Issued
Empire Technology Development LLC	United States of America	8226863	12/639836	Dec 16, 2009 Issued
Empire Technology Development LLC	Japan	4612739	2009-539561	Feb 4, 2009 Issued
Empire Technology Development LLC	United States of America	8058548	12/665015	Dec 16, 2009 Issued
Empire Technology Development LLC	China	ZL200980156051.0	200980156051.0	Feb 4, 2009 Issued

Empire Technology Development LLC	Germany	112009004290	112009004290.2	Feb 4, 2009 Issued
Empire Technology Development LLC	United States of America	8404964	13/252428	Oct 4, 2011 Issued
Empire Technology Development LLC	Japan	4368934	2009-027120	Feb 9, 2009 Issued
Empire Technology Development LLC	United States of America	8011603	12/642279	Dec 18, 2009 Issued
Empire Technology Development LLC	United States of America	8403239	13/193137	Jul 28, 2011 Issued
Empire Technology Development LLC	Japan	4484090	2009-085823	Mar 31, 2009 Issued
Empire Technology Development LLC	United States of America	8077589	12/642392	Dec 18, 2009 Issued
Empire Technology Development LLC	Japan	4571229	2009-541659	Jan 29, 2009 Issued
Empire Technology Development LLC	United States of America	9080138	12/665020	Dec 16, 2009 Issued
Empire Technology Development LLC	Japan	4504459	2009-540538	Jan 29, 2009 Issued
Empire Technology Development LLC	United States of America	8232111	12/665434	Dec 18, 2009 Issued
Empire Technology Development LLC	Japan	4515538	2009-516768	Dec 8, 2008 Issued
Empire Technology Development LLC	United States of America	7907451	12/665320	Dec 17, 2009 Issued
Empire Technology Development LLC	Japan	4344782	2009-123183	May 21, 2009 Issued
Empire Technology Development LLC	United States of America	7741840	12/540766	Aug 13, 2009 Issued
Empire Technology Development LLC	Japan	4376299	2009-131536	May 29, 2009 Issued
Empire Technology Development LLC	United States of America	8137770	12/614014	Nov 6, 2009 Issued
Empire Technology Development LLC	United States of America	10002483	13/369136	Feb 8, 2012 Issued
Empire Technology Development LLC	Japan	4376962	2009-060546	Mar 13, 2009 Issued
Empire Technology Development LLC	Japan	5044661	2009-545026	Mar 5, 2009 Issued
Empire Technology Development LLC	United States of America	8566060	12/665107	Dec 17, 2009 Issued
Empire Technology Development LLC	Japan	4931089	2009-060545	Mar 13, 2009 Issued
Empire Technology Development LLC	United States of America	8583452	12/640967	Sep 28, 2009 Issued
Empire Technology Development LLC	Japan	4369526	2009-060544	Dec 17, 2009 Issued
Empire Technology Development LLC	United States of America	7975284	12/568188	Mar 13, 2009 Issued
Empire Technology Development LLC	Japan	4573910	2009-545030	Mar 17, 2009 Issued
Empire Technology Development LLC	United States of America	8013866	12/665153	Dec 17, 2009 Issued
Empire Technology Development LLC	Japan	4614373	2009-545025	Mar 17, 2009 Issued
Empire Technology Development LLC	United States of America	8218054	12/665295	Dec 17, 2009 Issued
Empire Technology Development LLC	Japan	4726966	2009-020767	Jan 30, 2009 Issued
Empire Technology Development LLC	United States of America	9227504	12/642407	Dec 18, 2009 Issued
Empire Technology Development LLC	European Patent Office	2213496	09-179687.0	Mar 17, 2009 Issued
Empire Technology Development LLC	Germany	2213496	602009009670.2	Dec 17, 2009 Issued
Empire Technology Development LLC	France	2213496	09-179687.0	Dec 17, 2009 Issued
Empire Technology Development LLC	United Kingdom	2213496	09-179687.0	Dec 17, 2009 Issued
Empire Technology Development LLC	Italy	2213496	502012902109845	Dec 17, 2009 Issued

Empire Technology Development LLC	Sweden	2213496	09179687.0	Dec 17, 2009 Issued
Empire Technology Development LLC	United States of America	9096846	12/645113	Dec 22, 2009 Issued
Empire Technology Development LLC	United States of America	9080140	12/628850	Dec 1, 2009 Issued
Empire Technology Development LLC	United States of America	8569048	12/631623	Dec 4, 2009 Issued
Empire Technology Development LLC	United States of America	9050061	12/550629	Aug 31, 2009 Issued
Empire Technology Development LLC	United States of America	8951765	12/624972	Nov 24, 2009 Issued
Empire Technology Development LLC	United States of America	8736146	12/641662	Dec 18, 2009 Issued
Empire Technology Development LLC	Japan	5319433	2009-167900	Jul 16, 2009 Issued
Empire Technology Development LLC	United States of America	8817118	12/641115	Dec 17, 2009 Issued
Empire Technology Development LLC	United States of America	9237267	14/335583	Jul 18, 2014 Issued
Empire Technology Development LLC	United States of America	9071066	12/645085	Dec 22, 2009 Issued
Empire Technology Development LLC	United States of America	8423128	12/645309	Dec 22, 2009 Issued
Empire Technology Development LLC	Japan	5437987	2010-282723	Dec 20, 2010 Issued
Empire Technology Development LLC	United States of America	8923960	13/682669	Nov 20, 2012 Issued
Empire Technology Development LLC	United States of America	8172777	12/559228	Sep 14, 2009 Issued
Empire Technology Development LLC	United States of America	9229779	12/647711	Dec 28, 2009 Issued
Empire Technology Development LLC	Japan	4519193	2009-174642	Jul 27, 2009 Issued
Empire Technology Development LLC	United States of America	7908144	12/641991	Dec 18, 2009 Issued
Empire Technology Development LLC	United States of America	9046762	12/708054	Feb 18, 2010 Issued
Empire Technology Development LLC	Japan	5380602	2012-501038	Jul 7, 2010 Issued
Empire Technology Development LLC	United States of America	8437985	12/645385	Dec 22, 2009 Issued
Empire Technology Development LLC	European Patent Office	10844125.4		Jun 23, 2010 Allowed
Empire Technology Development LLC	United States of America	8282994	12/691462	Jan 21, 2010 Issued
Empire Technology Development LLC	China	ZL201080058087.8	201080058087.8	Jun 23, 2010 Issued
Empire Technology Development LLC	Japan	5579277	2012-548928	Jun 23, 2010 Issued
Empire Technology Development LLC	Japan	5579172	2011-514213	May 14, 2010 Issued
Empire Technology Development LLC	European Patent Office	10851425.8		May 14, 2010 Published
Empire Technology Development LLC	United States of America	8337967	13/201607	Aug 15, 2011 Issued
Empire Technology Development LLC	United States of America	9221583	13/683894	Nov 21, 2012 Issued
Empire Technology Development LLC	Japan	5026483	2009-212434	Sep 14, 2009 Issued
Empire Technology Development LLC	Japan	4669567	2010-038398	Feb 24, 2010 Issued
Empire Technology Development LLC	United States of America	8669477	12/960259	Dec 3, 2010 Issued
Empire Technology Development LLC	United States of America	8404441	12/762474	Apr 19, 2010 Issued
Empire Technology Development LLC	European Patent Office	2561357	10850390.5	May 28, 2010 Issued
Empire Technology Development LLC	United States of America	9029128	13/775882	Feb 25, 2013 Issued
Empire Technology Development LLC	France	2561357	10850390.5	May 28, 2010 Issued

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REEL: 048373 FRAME: 0328**

COBB_029419

Empire Technology Development LLC	United Kingdom	2561357	10850390.5	May 28, 2010 Issued
Empire Technology Development LLC	Germany	2561357	602010020625.4	May 28, 2010 Issued
Empire Technology Development LLC	Japan	5200044	2010-056236	Mar 12, 2010 Issued
Empire Technology Development LLC	United States of America	8388874	12/969011	Dec 15, 2010 Issued
Empire Technology Development LLC	United States of America	8581426	13/000456	Dec 21, 2010 Issued
Empire Technology Development LLC	Japan	4590018	2010-043430	Feb 26, 2010 Issued
Empire Technology Development LLC	United States of America	8538722	12/855908	Aug 13, 2010 Issued
Empire Technology Development LLC	Japan	4975841	2010-057926	Mar 15, 2010 Issued
Empire Technology Development LLC	United States of America	8451117	12/645495	Dec 23, 2009 Issued
Empire Technology Development LLC	Japan	4680312	2009-290053	Dec 22, 2009 Issued
Empire Technology Development LLC	United States of America	8405638	12/645176	Dec 22, 2009 Issued
Empire Technology Development LLC	Japan	4723667	2009-290427	Dec 22, 2009 Issued
Empire Technology Development LLC	United States of America	8427111	12/644660	Dec 22, 2009 Issued
Empire Technology Development LLC	United States of America	8773074	13/834941	Dec 15, 2013 Issued
Empire Technology Development LLC	Japan	4589447	2009-283043	Dec 14, 2009 Issued
Empire Technology Development LLC	United States of America	7981061	12/778352	May 12, 2010 Issued
Empire Technology Development LLC	Japan	5038451	2010-066464	Mar 23, 2010 Issued
Empire Technology Development LLC	Japan	4669560	2009-281319	Dec 11, 2009 Issued
Empire Technology Development LLC	United States of America	9206459	12/999469	Dec 16, 2010 Issued
Empire Technology Development LLC	Japan	4638551	2010-075108	Mar 29, 2010 Issued
Empire Technology Development LLC	Japan	4527194	2009-281897	Dec 11, 2009 Issued
Empire Technology Development LLC	United States of America	9607725	12/643434	Dec 21, 2009 Issued
Empire Technology Development LLC	United States of America	8767066	12/645496	Dec 23, 2009 Issued
Empire Technology Development LLC	United States of America	8441636	13/201124	Aug 11, 2011 Issued
Empire Technology Development LLC	China	ZL201080069836.7	201080069836.7	Nov 1, 2010 Issued
Empire Technology Development LLC	European Patent Office		10853354.8	Jun 16, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8501100	13/000796	Dec 22, 2010 Issued
Empire Technology Development LLC	China	ZL201080067388.7	201080067388.7	Jun 16, 2010 Issued
Empire Technology Development LLC	United States of America	5625109	8481987	Jun 19, 2010 Issued
Empire Technology Development LLC	Japan	5625109	12/993641	Jun 18, 2010 Issued
Empire Technology Development LLC	United States of America	8481987	2013-515316	Feb 14, 2011 Issued
Empire Technology Development LLC	Japan	5450897	8585799	Jun 15, 2010 Issued
Empire Technology Development LLC	United States of America	5450897	13/058944	May 25, 2011 Issued
Empire Technology Development LLC	Japan	5118120	2013-515304	Dec 16, 2009 Issued
Empire Technology Development LLC	United States of America	9303257	13/131152	Dec 22, 2009 Issued
Empire Technology Development LLC	Japan	8395048	12/644754	Jun 4, 2010 Issued
Empire Technology Development LLC	Japan	4781477	2010-129060	

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REEL: 048373 FRAME: 0329**

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Empire Technology Development LLC	Japan	4680319	2010-124275	May 31, 2010 Issued
Empire Technology Development LLC	United States of America	9075430	13/392966	Feb 28, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-150517	10-2012-7017938	Apr 26, 2011 Issued
Empire Technology Development LLC	China	ZL201180037763.8	201180037763.8	Apr 26, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1505757	10-2013-7004806	Feb 26, 2013 Issued
Empire Technology Development LLC	United States of America	9001033	13/791692	Mar 8, 2013 Issued
Empire Technology Development LLC	United States of America	9478070	14/690396	Apr 18, 2015 Issued
Empire Technology Development LLC	United States of America	4657369	2010-038300	Feb 24, 2010 Issued
Empire Technology Development LLC	United States of America	8172266	12/77008	Apr 29, 2010 Issued
Empire Technology Development LLC	United States of America	8286998	13/439209	Apr 4, 2012 Issued
Empire Technology Development LLC	United States of America	9018335	13/139709	Jun 14, 2011 Issued
Empire Technology Development LLC	Japan	4615065	2010-036240	Feb 22, 2010 Issued
Empire Technology Development LLC	United States of America	8660679	13/139819	Jun 15, 2011 Issued
Empire Technology Development LLC	China	ZL201080069998.0	201080069998.0	Dec 2, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1458939	10-2013-7006393	Dec 2, 2010 Issued
Empire Technology Development LLC	Japan	5735128	2013-541969	Dec 2, 2010 Issued
Empire Technology Development LLC	United States of America	4693192	2010-103610	Dec 15, 2010 Issued
Empire Technology Development LLC	United States of America	8125517	12/968952	Jan 10, 2014 Issued
Empire Technology Development LLC	Japan	5886435	2014-533289	Apr 28, 2010 Issued
Empire Technology Development LLC	Japan	4580037	2010-075215	Mar 29, 2010 Issued
Empire Technology Development LLC	United States of America	8808890	12/895494	Sep 30, 2010 Issued
Empire Technology Development LLC	United States of America	8990291	12/993465	Oct 7, 2011 Issued
Empire Technology Development LLC	Japan	5735095	2013-502719	Nov 18, 2010 Issued
Empire Technology Development LLC	China	ZL201080068150.6	201080068150.6	Jul 21, 2010 Issued
Empire Technology Development LLC	European Patent Office	2596431	10854991.6	Jul 21, 2010 Issued
Empire Technology Development LLC	Germany	2596431	602010038542.6	Jul 21, 2010 Issued
Empire Technology Development LLC	France	2596431	10854991.6	Jul 21, 2010 Issued
Empire Technology Development LLC	United Kingdom	2596431	10854991.6	Jul 21, 2010 Issued
Empire Technology Development LLC	European Patent Office	2598461	10855273.8	Jul 21, 2010 Issued
Empire Technology Development LLC	Japan	5736454	2013-519220	Jul 30, 2010 Issued
Empire Technology Development LLC	France	2598461	10855273.8	Jul 30, 2010 Issued
Empire Technology Development LLC	Germany	2598461	602010029618.0	Jul 30, 2010 Issued
Empire Technology Development LLC	United Kingdom	2598461	10855273.8	Jul 30, 2010 Issued
Empire Technology Development LLC	Japan	4580038	2010-102141	Apr 27, 2010 Issued

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REEL: 048373 FRAME: 0330**

COBB_029421

Empire Technology Development LLC	United States of America	8097352	12/895544	Sep 30, 2010 Issued
Empire Technology Development LLC	United States of America	8866066	13/062496	Mar 4, 2011 Issued
Empire Technology Development LLC	Japan	4668349	2010-075351	Mar 29, 2010 Issued
Empire Technology Development LLC	United States of America	8633727	12/968984	Dec 15, 2010 Issued
Empire Technology Development LLC	United States of America	8732436	12/993094	Nov 17, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1526515	10-2013-7002802	Jul 2, 2010 Issued
Empire Technology Development LLC	Japan	5787909	2012-558123	Jul 2, 2010 Issued
Empire Technology Development LLC	United States of America	8871637	13/122957	Apr 6, 2011 Issued
Empire Technology Development LLC	Japan	5763775	2013-536586	Nov 2, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1475852	10-2013-7013678	Nov 2, 2010 Issued
Empire Technology Development LLC	United States of America	8615864	13/000421	Dec 21, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1472470	10-2013-7009207	Sep 14, 2010 Issued
Empire Technology Development LLC	Japan	5631496	2013-528177	Sep 14, 2010 Issued
Empire Technology Development LLC	China	ZL201080069099.0	201080069099.0	Sep 14, 2010 Issued
Empire Technology Development LLC	United States of America	9160043	14/083279	Nov 18, 2013 Issued
Empire Technology Development LLC	United States of America	9256379	13/124558	Apr 15, 2011 Issued
Empire Technology Development LLC	United States of America	8758916	13/062516	Mar 6, 2011 Issued
Empire Technology Development LLC	Japan	5721847	2013-536576	Oct 29, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1526516	10-2013-7013277	Oct 29, 2010 Issued
Empire Technology Development LLC	United States of America	8483811	13/000127	Dec 20, 2010 Issued
Empire Technology Development LLC	United States of America	8379412	12/9999628	Dec 16, 2010 Issued
Empire Technology Development LLC	Japan	5202653	2010-549955	Aug 16, 2010 Issued
Empire Technology Development LLC	China	ZL201080068551.1	201080068551.1	Aug 16, 2010 Issued
Empire Technology Development LLC	United States of America	8416573	13/122877	Apr 6, 2011 Issued
Empire Technology Development LLC	China	ZL201080068558.3	201080068558.3	Aug 10, 2010 Issued
Empire Technology Development LLC	United States of America	8907220	13/122961	Aug 6, 2011 Issued
Empire Technology Development LLC	European Patent Office	11859101.5		Feb 24, 2011 Marked for Impairing
Empire Technology Development LLC	United States of America	8813184	13/260154	Sep 23, 2011 Issued
Empire Technology Development LLC	Japan	5587492	2013-501271	Feb 24, 2011 Issued
Empire Technology Development LLC	China	ZL201180059321.3	201180059321.3	Feb 24, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1463362	10-2013-7010513	Feb 24, 2011 Issued
Empire Technology Development LLC	United States of America	9361450	14/460227	Feb 24, 2011 Issued
Empire Technology Development LLC	United States of America	9012205	13/264977	Aug 14, 2014 Issued
Empire Technology Development LLC	United States of America	8252238	13/143715	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	8354061	13/552325	Jul 7, 2011 Issued
Empire Technology Development LLC	China	ZL201080069796.6	201080069796.6	Jul 18, 2012 Issued
				Nov 1, 2010 Issued

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REEL: 048373 FRAME: 0331**

COBB_029422

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Empire Technology Development LLC	China	ZL201180067657.4	201180067657.4	Apr 8, 2011 Issued
Empire Technology Development LLC	Japan	6093754	2014-502530	Apr 8, 2011 Issued
Empire Technology Development LLC	United States of America	8845785	13/262898	Oct 4, 2011 Issued
Empire Technology Development LLC	China	ZL201080070120.9	201080070120.9	Nov 26, 2010 Issued
Empire Technology Development LLC	United States of America	9403114	14/310034	Jun 20, 2014 Issued
Empire Technology Development LLC	United States of America	8182712	13/133614	Jun 8, 2011 Issued
Empire Technology Development LLC	China	ZL201180055271.1	201180055271.1	Jan 12, 2011 Issued
Empire Technology Development LLC	United States of America	8529640	13/577729	Aug 8, 2012 Issued
Empire Technology Development LLC	Japan	5180368	2011-505308	Oct 4, 2010 Issued
Empire Technology Development LLC	United States of America	9087351	13/127301	May 3, 2011 Issued
Empire Technology Development LLC	China	ZL201080069490.0	201080069490.0	Oct 4, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1314201	10-2013-7010166	Oct 4, 2010 Issued
Empire Technology Development LLC	United States of America	8177913	13/119731	Mar 18, 2011 Issued
Empire Technology Development LLC	United States of America	8530402	13/445254	Apr 12, 2012 Issued
Empire Technology Development LLC	United States of America	8993494	13/144544	Jul 14, 2011 Issued
Empire Technology Development LLC	United States of America	9030466	13/122912	Apr 6, 2011 Issued
Empire Technology Development LLC	Japan	5536071	2011-527918	Oct 5, 2010 Issued
Empire Technology Development LLC	China	ZL201080067567.0	201080067567.0	Oct 5, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1494066	10-2012-7032859	Oct 5, 2010 Issued
Empire Technology Development LLC	United States of America	9746319	14/660769	Oct 5, 2010 Issued
Empire Technology Development LLC	Brazil	BR1201300833131		Oct 5, 2010 Pending
Empire Technology Development LLC	Japan	4139882	2000-035119	Feb 14, 2000 Issued
Empire Technology Development LLC	United States of America	6488908	09/652011	Aug 31, 2000 Issued
Empire Technology Development LLC	United States of America	6994947	10/084480	Feb 28, 2002 Issued
Empire Technology Development LLC	Japan	3605642	2002-055387	Mar 1, 2002 Issued
Empire Technology Development LLC	Japan	4016101	2002-242208	Aug 22, 2002 Issued
Empire Technology Development LLC	United States of America	6950332	10/639471	Aug 13, 2003 Issued
Empire Technology Development LLC	European Patent Office	1391894	03/018621.7	Aug 19, 2003 Issued
Empire Technology Development LLC	Republic of Korea	10-0563423	10-2003-0058006	Aug 21, 2003 Issued
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Empire Technology Development LLC	Netherlands	1391894	03/018621.7	Aug 19, 2003 Issued
Empire Technology Development LLC	Japan	3893456	2002-304124	Oct 18, 2002 Issued
Empire Technology Development LLC	United States of America		6940750	Oct 8, 2003 Issued

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REEL: 048373 FRAME: 0332**

COBB_029423

Empire Technology Development LLC	European Patent Office	1411525	03022959.5	Oct 9, 2003 Issued
Empire Technology Development LLC	Republic of Korea	10-0519898	10-2003-0071849	Oct 15, 2003 Issued
Empire Technology Development LLC	Germany	1411525	60323801.7	Oct 9, 2003 Issued
Empire Technology Development LLC	Spain	1411525	03022959.5	Oct 9, 2003 Issued
Empire Technology Development LLC	France	1411525	03022959.5	Oct 9, 2003 Issued
Empire Technology Development LLC	United Kingdom	1411525	03022959.5	Oct 9, 2003 Issued
Empire Technology Development LLC	Italy	1411525	502008901665658	Oct 9, 2003 Issued
Empire Technology Development LLC	Japan	3987924	2002-362200	Oct 9, 2003 Issued
Empire Technology Development LLC	European Patent Office	1429351	03027820.4	Oct 9, 2003 Issued
Empire Technology Development LLC	Republic of Korea	10-0526280	10-2003-0089964	Oct 9, 2003 Issued
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Empire Technology Development LLC	France	1429351	03027820.4	Oct 9, 2003 Issued
Empire Technology Development LLC	United Kingdom	1429351	03027820.4	Oct 9, 2003 Issued
Empire Technology Development LLC	United States of America	8932502	13/143173	Dec 3, 2003 Issued
Empire Technology Development LLC	China	ZL201180060973.9	201180060973.9	Dec 3, 2003 Issued
Empire Technology Development LLC	Japan	5654693	2013-553414	Dec 3, 2003 Issued
Empire Technology Development LLC	United States of America	10028396 14/562533	10028396 14/562533	Dec 5, 2014 Issued
Empire Technology Development LLC	United States of America	8831392	13/320733	Nov 15, 2011 Issued
Empire Technology Development LLC	United States of America	8561372	13/519296	Jun 26, 2012 Issued
Empire Technology Development LLC	United States of America	9365449	13/421947	Mar 16, 2012 Issued
Empire Technology Development LLC	United States of America	8985888	13/379211	Dec 19, 2011 Issued
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Empire Technology Development LLC	China	ZL201180070176.9	201180070176.9	Feb 16, 2011 Issued
Empire Technology Development LLC	United States of America	9199864	13/395540	Feb 16, 2011 Issued
Empire Technology Development LLC	United States of America	9151969	13/704329	Dec 5, 2014 Issued
Empire Technology Development LLC	United States of America	8811781	13/143096	Dec 5, 2014 Issued
Empire Technology Development LLC	United States of America	9004817	13/142372	Nov 15, 2011 Issued
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Empire Technology Development LLC	Japan	5536237	2012-552882	Nov 15, 2011 Issued
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Empire Technology Development LLC	United States of America	8288459	13/126155	Jan 13, 2011 Issued
Empire Technology Development LLC	United States of America	9489384	13/992737	Apr 26, 2011 Issued
Empire Technology Development LLC	United States of America	9210304	14/002981	Jun 8, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1629881	10-2014-7028994	Sep 3, 2013 Issued
Empire Technology Development LLC	United States of America	8413462	13/132890	Mar 16, 2012 Issued
				Jun 3, 2011 Issued

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REEL: 048373 FRAME: 0333**

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Empire Technology Development LLC	China	ZL201180065154.3	201180065154.3	Mar 7, 2011 Issued
Empire Technology Development LLC	Japan	5563170	2013-557672	Mar 7, 2011 Issued
Empire Technology Development LLC	United States of America	6185838	8830791 13/256670	Sep 15, 2011 Issued
Empire Technology Development LLC	United States of America	6185838	9267585 13/823193	Apr 27, 2011 Issued
Empire Technology Development LLC	United States of America	8938070	13/395119	Mar 14, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1497386	10-2013-7024140	Mar 8, 2012 Issued
Empire Technology Development LLC	United States of America	9270452	14/517094	May 24, 2011 Issued
Empire Technology Development LLC	United States of America	9575271	14/000198	Oct 17, 2014 Issued
Empire Technology Development LLC	United States of America	8947356	13/254635	Apr 14, 2014 Issued
Empire Technology Development LLC	China	ZL201180053820.1	201180053820.1	Sep 2, 2011 Issued
Empire Technology Development LLC	China	5638152	2013-546102	Mar 31, 2011 Issued
Empire Technology Development LLC	China	ZL201180073257.4	201180073257.4	Mar 31, 2011 Issued
Empire Technology Development LLC	Japan	5844907	2014-528367	Sep 13, 2011 Issued
Empire Technology Development LLC	United States of America	9147918	13/264981	Apr 15, 2013 Marked for Impairing
Empire Technology Development LLC	United States of America	5845277	2013-538711	Oct 17, 2011 Issued
Empire Technology Development LLC	Japan	10-1533674	10-2013-7016663	May 27, 2011 Issued
Empire Technology Development LLC	Republic of Korea	ZL201180048492.6	201180048492.6	May 27, 2011 Issued
Empire Technology Development LLC	China	11866884.7	11866884.7	May 27, 2011 Published
Empire Technology Development LLC	European Patent Office	8444922	13/148919	Aug 10, 2011 Issued
Empire Technology Development LLC	United States of America	8703062	13/860432	Apr 10, 2013 Issued
Empire Technology Development LLC	United States of America	8703062	13/860432	May 2, 2011 Issued
Empire Technology Development LLC	China	ZL201180070413.1	201180070413.1	Jul 13, 2012 Issued
Empire Technology Development LLC	United States of America	9711134	13/522299	Nov 21, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1611224	10-2014-7008642	Nov 21, 2011 Published
Empire Technology Development LLC	European Patent Office	11876267.3	11876267.3	Oct 12, 2012 Issued
Empire Technology Development LLC	United States of America	9539586	13/641095	Feb 2, 2012 Issued
Empire Technology Development LLC	United States of America	8941605	13/388663	Jun 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1504137	10-2013-7033798	Jun 16, 2011 Issued
Empire Technology Development LLC	Japan	5717308	2014-515794	Jun 16, 2011 Issued
Empire Technology Development LLC	United States of America	9800657	13/503690	Apr 24, 2012 Issued
Empire Technology Development LLC	Japan	5852739	2014-525975	Aug 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1584329	10-2014-7005208	Aug 16, 2011 Issued
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Empire Technology Development LLC	United States of America	9260574	13/514036	Jun 5, 2012 Issued

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Empire Technology Development LLC	China	ZL201180073350.5	201180073350.5	Oct 18, 2011 Issued
Empire Technology Development LLC	Japan	6215211	2014-535707	Oct 18, 2011 Issued
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Empire Technology Development LLC	United States of America		8916263 14/293448	Jun 2, 2014 Issued
Empire Technology Development LLC	United States of America	9103066	14/565894	Dec 10, 2014 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I564914	102104591	Feb 6, 2013 Issued
Empire Technology Development LLC	United States of America		13/641,843	Oct 17, 2012 Marked for Impairing
Empire Technology Development LLC	United States of America	8887255	13/522932	Jul 18, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1647911	10-2014-702377	Mar 16, 2012 Issued
Empire Technology Development LLC	China	ZL201280071313.5	201280071313.5	Mar 16, 2012 Issued
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Empire Technology Development LLC	United States of America		9727847 14/110442	Oct 8, 2013 Issued
Empire Technology Development LLC	China	ZL201180070351.4	201180070351.4	Feb 29, 2016 Issued
Empire Technology Development LLC	Republic of Korea	10-1799622	10-2013-7021427	Jun 14, 2011 Issued
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Empire Technology Development LLC	Republic of Korea	10-1780161	10-2016-7005476	Oct 12, 2011 Issued
Empire Technology Development LLC	United States of America	8992122	13/504473	Oct 12, 2011 Issued
Empire Technology Development LLC	China	ZL201180073504.0	201180073504.0	Oct 12, 2011 Issued
Empire Technology Development LLC	Japan	5914670	2014-533290	Oct 12, 2011 Issued
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Empire Technology Development LLC	United States of America		8845233 13/517974	Jun 20, 2012 Issued
Empire Technology Development LLC	China	ZL201180073692.7	201180073692.7	Oct 13, 2011 Issued
Empire Technology Development LLC	Japan	5881834	2014-535700	Oct 13, 2011 Issued
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Empire Technology Development LLC	United States of America		9667744 15/170131	Jun 1, 2016 Issued
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Empire Technology Development LLC	United States of America		9409318 13/640781	Oct 12, 2012 Issued

**PATENT
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Empire Technology Development LLC	Japan	5923626	2014-557617	Feb 24, 2012 Issued
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Empire Technology Development LLC	United States of America	9838892	14/517262	Oct 17, 2014 Issued
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Empire Technology Development LLC	Japan	6033326	2014-547149	Dec 12, 2011 Issued
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Empire Technology Development LLC	China	10-1713791	10-2014-7028075	Mar 5, 2012 Issued
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Empire Technology Development LLC	United States of America		201280075130.0	Jan 10, 2013 Issued
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Empire Technology Development LLC	United States of America	9887271	14/908899	Jan 29, 2016 Issued
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Empire Technology Development LLC	United States of America	15/290,110		Oct 11, 2016 Published
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Empire Technology Development LLC	Republic of Korea	10-1752305	10-2015-7037070	May 30, 2013 Issued
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Empire Technology Development LLC	United States of America	15/449,019	15/449,019	Jun 18, 2014 Published
Empire Technology Development LLC	United States of America	15/036,369	15/036,369	Mar 3, 2017 Published
Empire Technology Development LLC	United States of America	14/646,031	14/646,031	May 12, 2016 Published
Empire Technology Development LLC	United States of America	9952704	15/026611	May 20, 2015 Published
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Empire Technology Development LLC	United States of America	15/030,880	15/030,880	Mar 24, 2014 Issued
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Empire Technology Development LLC	Japan	10-1816014	10-2015-7037071	May 30, 2013 Issued
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Empire Technology Development LLC	United States of America	14/897,216	14/897,216	Dec 9, 2015 Published
Empire Technology Development LLC	United States of America	15/121,788	15/121,788	Aug 26, 2016 Marked for Impairing

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Empire Technology Development LLC	China	201380081854.0	Dec 27, 2013 Marked for Impairing
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Empire Technology Development LLC	India	201617033704	Mar 3, 2014 Published
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REEL: 048373 FRAME: 0341

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Empire Technology Development LLC	United States of America	8532438	12/303686	Dec 5, 2008 Issued
Empire Technology Development LLC	United States of America	8358817	12/123121	May 19, 2008 Issued
Empire Technology Development LLC	United States of America	8736751	12/198825	Aug 26, 2008 Issued
Empire Technology Development LLC	Germany	102008060076	10/2008060076.8	Dec 2, 2008 Issued
Empire Technology Development LLC	Japan	4888978	2008-310397	Dec 5, 2008 Issued
Empire Technology Development LLC	China	ZL200810182919.1	200810182919.1	Dec 5, 2008 Issued
Empire Technology Development LLC	United States of America	8229928	12/395441	Feb 27, 2009 Issued
Empire Technology Development LLC	United States of America	8913563	12/366800	Feb 6, 2009 Issued
Empire Technology Development LLC	Japan	5189112	2010-005838	Jan 14, 2010 Issued
Empire Technology Development LLC	United States of America	8564667	12/1545728	Aug 21, 2009 Issued
Empire Technology Development LLC	United States of America	8187553	12/766349	Apr 23, 2010 Issued
Empire Technology Development LLC	China	ZL201080063469.X	201080063469.X	Dec 16, 2010 Issued
Empire Technology Development LLC	Japan	5597303	2013-501237	Dec 16, 2010 Issued
Empire Technology Development LLC	European Patent Office	8866587	12/999130	Dec 16, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	ZL201080067503.0	201080067503.0	Dec 15, 2010 Issued
Empire Technology Development LLC	China	10-1409951	10-2012-7029463	Aug 17, 2010 Issued
Empire Technology Development LLC	Republic of Korea	5603493	2013-523140	Aug 17, 2010 Issued
Empire Technology Development LLC	Japan	9570037	14/483928	Sep 11, 2014 Issued
Empire Technology Development LLC	United States of America	8885852	13/121322	Mar 28, 2011 Issued
Empire Technology Development LLC	China	ZL201080069221.4	201080069221.4	Dec 22, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1441398	10-2013-7007770	Dec 22, 2010 Issued
Empire Technology Development LLC	United States of America	8744068	13/143521	Jul 6, 2011 Issued
Empire Technology Development LLC	United States of America	8559927	13/119413	Mar 16, 2011 Issued
Empire Technology Development LLC	China	ZL201080070100.1	201080070100.1	Dec 21, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1424411	10-2013-7006116	Dec 21, 2010 Issued
Empire Technology Development LLC	United States of America	8991132	13/809884	Dec 21, 2010 Issued
Empire Technology Development LLC	United States of America	8766912	13/121791	Dec 21, 2010 Issued
Empire Technology Development LLC	China	ZL201080069222.9	201080069222.9	Dec 29, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1430887	10-2013-7006111	Dec 29, 2010 Issued
Empire Technology Development LLC	Japan	5777731	2013-547409	Dec 29, 2010 Issued
Empire Technology Development LLC	United States of America	9851804	14/297584	Jun 5, 2014 Issued

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Empire Technology Development LLC	United States of America	8427427	13/123450	Apr 8, 2011 Issued
Empire Technology Development LLC	United States of America	8823748	13/853313	Apr 15, 2013 Issued
Empire Technology Development LLC	China	ZL201080069990.4	201080069990.4	Dec 13, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1804030	10-2015-7020932	Jul 31, 2015 Issued
Empire Technology Development LLC	Finland		20135264	Dec 13, 2010 Pending
Empire Technology Development LLC	Republic of Korea		10-2015-7002582	Feb 24, 2011 Allowed
Empire Technology Development LLC	China	ZL201180052752.7	201180052752.7	Feb 24, 2011 Issued
Empire Technology Development LLC	United States of America	8543085	13/142054	Jun 1, 2011 Published
Empire Technology Development LLC	United States of America	5388392	2013-523080	Jun 24, 2011 Issued
Empire Technology Development LLC	Japan	10-1425333	10-2013-7023898	Mar 30, 2011 Issued
Empire Technology Development LLC	Japan	5568193	2014-501054	Mar 30, 2011 Issued
Empire Technology Development LLC	United States of America	9266019	13/511844	May 24, 2012 Issued
Empire Technology Development LLC	Japan	5388392	2013-523080	Jul 1, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1748767	10-2013-7033155	Jul 1, 2011 Issued
Empire Technology Development LLC	China	ZL201180072043.5	201180072043.5	Jul 1, 2011 Issued
Empire Technology Development LLC	United States of America	9823740	14/982184	Dec 29, 2015 Issued
Empire Technology Development LLC	Republic of Korea	10-1765214	10-2015-7035929	Dec 18, 2015 Issued
Empire Technology Development LLC	Republic of Korea	10-1529262	10-2013-7030009	Jul 1, 2011 Issued
Empire Technology Development LLC	United States of America	9390318	13/805286	Dec 18, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1566807	10-2014-7000007	Aug 31, 2011 Issued
Empire Technology Development LLC	China	ZL201180073081.2	201180073081.2	Aug 31, 2011 Issued
Empire Technology Development LLC	Japan	5823042	2014-525906	Aug 31, 2011 Issued
Empire Technology Development LLC	United States of America	9008609	13/503813	Apr 24, 2012 Issued
Empire Technology Development LLC	China	ZL201180072810.2	201180072810.2	Aug 12, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1554196	10-2014-7005207	Aug 12, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1671054	10-2013-7030774	Sep 28, 2011 Issued
Empire Technology Development LLC	Japan	6082742	2014-527136	Sep 28, 2011 Issued
Empire Technology Development LLC	United States of America	9037090	13/700078	Nov 26, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1609494	10-2014-7018036	Feb 7, 2012 Issued
Empire Technology Development LLC	China	ZL201280050763.6	201280050763.6	Feb 7, 2012 Issued
Empire Technology Development LLC	United States of America	9430075	14/701460	Apr 30, 2015 Issued
Empire Technology Development LLC	United States of America	8931062	13/505650	May 2, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1502385	10-2014-7008710	Nov 10, 2011 Issued
Empire Technology Development LLC	China	ZL201180073315.3	201180073315.3	Nov 10, 2011 Issued
Empire Technology Development LLC	Japan	5851046	2014-538773	Oct 30, 2012 Issued
Empire Technology Development LLC	United States of America	8976249	13/695356	Oct 30, 2012 Issued

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COBB_029434

Empire Technology Development LLC	Republic of Korea	10-1566812	10-2014-7008709	Nov 4, 2011 Issued
Empire Technology Development LLC	China	ZL201180074630.8	201180074630.8	Nov 4, 2011 Issued
Empire Technology Development LLC	Japan	6178321	2014-535708	Nov 4, 2011 Issued
Empire Technology Development LLC	United States of America	9398288	14/611952	Feb 2, 2015 Issued
Empire Technology Development LLC	United States of America	8843793	13/503827	Apr 24, 2012 Issued
Empire Technology Development LLC	United States of America	8684821	13/805464	Dec 19, 2012 Issued
Empire Technology Development LLC	United States of America	9220980	14/175232	Feb 7, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1575121	10-2014-7013571	Dec 19, 2011 Issued
Empire Technology Development LLC	China	ZL201180075326.5	201180075326.5	Dec 19, 2011 Issued
Empire Technology Development LLC	Japan	5851048	2014-548637	Dec 19, 2011 Issued
Empire Technology Development LLC	United States of America	ZL2012800772285.9	2012800772285.9	Aug 6, 2012 Issued
Empire Technology Development LLC	China	10-1767428	10-2016-7021129	Apr 10, 2012 Issued
Empire Technology Development LLC	United States of America	9558292	13/577411	Aug 2, 2016 Issued
Empire Technology Development LLC	United States of America	8913498	13/580225	Dec 22, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	8790179	13/636794	Aug 21, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1516245	10-2014-7013568	Sep 24, 2012 Issued
Empire Technology Development LLC	China	ZL201280059049.3	201280059049.3	Feb 24, 2012 Issued
Empire Technology Development LLC	Japan	5807130	2014-558720	Feb 24, 2012 Issued
Empire Technology Development LLC	United States of America	9066225	13/989720	May 24, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1867600	10-2014-7032897	Feb 24, 2012 Issued
Empire Technology Development LLC	United States of America	9164892	13/977262	Jun 28, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1621788	10-2015-7005243	Jul 30, 2012 Issued
Empire Technology Development LLC	United States of America	8769193	13/809384	Jan 9, 2013 Issued
Empire Technology Development LLC	United States of America	9158680	14/304788	Jun 13, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1695341	10-2014-7033735	Apr 30, 2012 Issued
Empire Technology Development LLC	China	ZL201280072814.5	201280072814.5	Apr 30, 2012 Issued
Empire Technology Development LLC	European Patent Office	8824443	13/978553	Mar 19, 2012 Allowed
Empire Technology Development LLC	United States of America	9326232	14/455043	Jul 8, 2013 Issued
Empire Technology Development LLC	United States of America	10-1875861	10-2014-7029329	Aug 8, 2014 Issued
Empire Technology Development LLC	Republic of Korea	6067096	2015-501551	Mar 19, 2012 Issued
Empire Technology Development LLC	Japan	9750064	15/067890	Mar 19, 2012 Published
Empire Technology Development LLC	United States of America	9083638	13/576265	Jul 31, 2012 Issued
Empire Technology Development LLC	China	201280071611.4		Feb 10, 2012 Issued
Empire Technology Development LLC	United States of America	10-1630215	10-2014-7012966	
Empire Technology Development LLC	Republic of Korea			

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COBB_029435

Empire Technology Development LLC	Japan	5945006	2014-553284	Feb 10, 2012 Issued
Empire Technology Development LLC	United States of America	906587	14/708724	May 11, 2015 Issued
Empire Technology Development LLC	Republic of Korea	8795087	13/636801	Sep 24, 2012 Issued
Empire Technology Development LLC	China	10-1595075	10-2014-7012969	Feb 14, 2012 Issued
Empire Technology Development LLC	Japan	ZL201280063166.7	201280063166.7	Feb 14, 2012 Issued
Empire Technology Development LLC	Japan	5945010	2014-556529	Feb 14, 2012 Issued
Empire Technology Development LLC	United States of America	9237115	14/305547	Jun 16, 2014 Issued
Empire Technology Development LLC	United States of America	9531797	14/884195	Oct 15, 2015 Issued
Empire Technology Development LLC	United States of America	9294335	13/642816	Oct 22, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1609812	10-2014-7031051	Apr 9, 2012 Issued
Empire Technology Development LLC	United States of America	9961146	14/972511	Dec 17, 2015 Issued
Empire Technology Development LLC	United States of America	9132350	13/697243	Nov 9, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1463323	10-2012-7032806	Feb 14, 2012 Issued
Empire Technology Development LLC	United States of America	9712566	13/575815	Jul 27, 2012 Issued
Empire Technology Development LLC	United States of America	9713765	13/635273	Sep 14, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1659922	10-2014-7039330	Apr 20, 2012 Marked for Impairing
Empire Technology Development LLC	United States of America	9177652	14/7235406	Jul 24, 2017 Published
Empire Technology Development LLC	United States of America	15/657,869		Jan 27, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1613158	10-2015-7000718	Jul 30, 2012 Issued
Empire Technology Development LLC	United States of America	9965130	13/701349	Nov 26, 2012 Issued
Empire Technology Development LLC	United States of America	9351222	13/534613	Jun 13, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1423250	10-2012-0114073	Nov 30, 2012 Issued
Empire Technology Development LLC	United States of America	8948091	13/996323	Jun 27, 2012 Issued
Empire Technology Development LLC	Japan	6049876	2015-521521	Oct 15, 2012 Issued
Empire Technology Development LLC	European Patent Office	12880930.8		Jun 20, 2013 Issued
Empire Technology Development LLC	United States of America	8885570	13/995840	Jul 10, 2012 Issued
Empire Technology Development LLC	European Patent Office	2873293	12880845.8	Jun 19, 2013 Issued
Empire Technology Development LLC	Japan	5775651	2015-521522	Jul 11, 2012 Issued
Empire Technology Development LLC	Germany	2873293	602012023415.6	Jul 11, 2012 Issued
Empire Technology Development LLC	France	2873293	12880845.8	Jul 11, 2012 Issued
Empire Technology Development LLC	United Kingdom	2873293	12880845.8	Jul 11, 2012 Issued
Empire Technology Development LLC	United States of America	9107067	13/996724	Jun 21, 2013 Issued
Empire Technology Development LLC	China	ZL201280075738.3	201280075738.3	Sep 11, 2012 Issued
Empire Technology Development LLC	United States of America	9471574	13/805785	Dec 20, 2012 Issued

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Empire Technology Development LLC	China	ZL201280074840.1	201280074840.1	Jul 24, 2012 Issued
Empire Technology Development LLC	United States of America	10078637	15/238178	Aug 16, 2016 Issued
Empire Technology Development LLC	Republic of Korea	9241035	13/701359	Nov 30, 2012 Issued
Empire Technology Development LLC	United States of America	10-1630136	10-2015-7000234	Jul 6, 2012 Issued
Empire Technology Development LLC	Republic of Korea	9331966	13/701324	Nov 30, 2012 Issued
Empire Technology Development LLC	United States of America	10-1614665	10-2015-7000233	Jul 6, 2012 Issued
Empire Technology Development LLC	United States of America	9942183	15/084879	Mar 30, 2016 Issued
Empire Technology Development LLC	United States of America	9298717	13/701370	Nov 30, 2012 Issued
Empire Technology Development LLC	China	ZL201280073972.2	201280073972.2	Jun 14, 2012 Issued
Empire Technology Development LLC	United States of America	9232115	13/810497	Jan 16, 2013 Issued
Empire Technology Development LLC	United States of America	9848226	14/951685	Nov 25, 2015 Issued
Empire Technology Development LLC	China		201280074709.5	Jul 17, 2012 Published
Empire Technology Development LLC	United States of America	9462502	13/825096	Mar 19, 2013 Issued
Empire Technology Development LLC	United States of America	9141588	13/996331	Jun 20, 2013 Issued
Empire Technology Development LLC	United States of America	9208473	13/878153	Apr 5, 2013 Issued
Empire Technology Development LLC	United States of America	9930001	14/926417	Oct 29, 2015 Issued
Empire Technology Development LLC	United States of America	9251804	13/878357	Apr 8, 2013 Issued
Empire Technology Development LLC	United States of America	9717005	13/885754	May 16, 2013 Issued
Empire Technology Development LLC	United States of America	9961552	14/693400	Apr 22, 2015 Issued
Empire Technology Development LLC	United States of America	15/941,476		Mar 30, 2018 Published
Empire Technology Development LLC	United States of America	15/026,606		Apr 1, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	9794671	15/110466	Jul 8, 2016 Issued
Empire Technology Development LLC	United States of America	9033790	13/882493	Apr 29, 2013 Issued
Empire Technology Development LLC	United States of America	10091149	13/996290	Jun 20, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1732413	10-2015-7014293	Dec 21, 2012 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I550401	103127046	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	9747993	14/908340	Jan 28, 2016 Issued
Empire Technology Development LLC	China	2013800787434	201380078743.4	Aug 13, 2013 Issued
Empire Technology Development LLC	United States of America	9622141	14/376330	Aug 1, 2014 Issued
Empire Technology Development LLC	United States of America	10039044	15/466178	Mar 22, 2017 Issued
Empire Technology Development LLC	European Patent Office	13885688.5		May 31, 2013 Published
Empire Technology Development LLC	United States of America	9569802	14/118090	Nov 15, 2013 Issued
Empire Technology Development LLC	United States of America	9510006	14/124389	Dec 6, 2013 Issued
Empire Technology Development LLC	United States of America	9817989	14/343968	Mar 10, 2014 Issued
Empire Technology Development LLC	China	201380078112.2		Jul 8, 2013 Published
Empire Technology Development LLC	United States of America	9602610	14/007635	Sep 25, 2013 Issued

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COBB_029437

Empire Technology Development LLC	United States of America	9912770 15/297434	Oct 19, 2016 Issued
Empire Technology Development LLC	United States of America	9934075 14/375902	Jul 31, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1827547 10-2016-7002238	Jun 28, 2013 Issued
Empire Technology Development LLC	United States of America	9501660 14/372925	Jul 17, 2014 Issued
Empire Technology Development LLC	United States of America	9916473 15/294868	Oct 17, 2016 Issued
Empire Technology Development LLC	United States of America	9915920 15/117730	Aug 10, 2016 Issued
Empire Technology Development LLC	United States of America	9854563 14/118707	Nov 19, 2013 Issued
Empire Technology Development LLC	Germany	112013007177.0	Jun 21, 2013 Published
Empire Technology Development LLC	United States of America	9439200 14/130018	Dec 30, 2013 Issued
Empire Technology Development LLC	United States of America	9832299 14/377388	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	9358467 14/372340	Jul 15, 2014 Issued
Empire Technology Development LLC	United States of America	9830437 14/377410	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	9716885 14/128692	Dec 23, 2013 Issued
Empire Technology Development LLC	United States of America	9996601 14/385015	Sep 12, 2014 Issued
Empire Technology Development LLC	United States of America	9744464 14/377612	Aug 8, 2014 Issued
Empire Technology Development LLC	United States of America	14/384,962	Sep 12, 2014 Published
Empire Technology Development LLC	United States of America	9830618 14/377393	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	15/822,499	Sep 27, 2017 Published
Empire Technology Development LLC	United States of America	9661465 14/758595	Jun 30, 2015 Issued
Empire Technology Development LLC	United States of America	10057717 15/601135	May 22, 2017 Issued
Empire Technology Development LLC	United States of America	9971016 14/785650	Sep 26, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	15/947,243	Oct 20, 2015 Issued
Empire Technology Development LLC	United States of America	10104497 15/128957	Apr 6, 2018 Published
Empire Technology Development LLC	United States of America	14/388,551	Sep 23, 2016 Issued
Empire Technology Development LLC	United States of America	10-1870371 10-2016-7024639	Sep 26, 2014 Issued
Empire Technology Development LLC	United States of America	15/308,611	Feb 26, 2014 Issued
Empire Technology Development LLC	China	15/984,367	Nov 3, 2016 Allowed
Empire Technology Development LLC	United States of America	9710893 14/785647	May 20, 2018 Allowed
Empire Technology Development LLC	United States of America	9978126 15/612057	Oct 20, 2015 Issued
Empire Technology Development LLC	United States of America	201480076696.4	Jun 2, 2017 Issued
Empire Technology Development LLC	China	10027466 14/888850	Apr 30, 2014 Published
Empire Technology Development LLC	United States of America	16/035,364	Nov 3, 2015 Issued
Empire Technology Development LLC	United States of America	9730170 14/298973	Jul 13, 2018 Pending
Empire Technology Development LLC	China	201510308900.7	Jun 9, 2014 Issued
Empire Technology Development LLC	United States of America	9954625 14/888861	Jun 8, 2015 Published
Empire Technology Development LLC	United States of America	15/941,130	Nov 3, 2015 Issued
Empire Technology Development LLC	United States of America		Mar 30, 2018 Published

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Empire Technology Development LLC	United States of America	9641660	14/784595	Oct 15, 2015 Issued
Empire Technology Development LLC	United States of America	9852445	14/295936	Jun 4, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1724584	10-2015-0077833	Jun 2, 2015 Issued
Empire Technology Development LLC	United States of America		15/843,067	Dec 15, 2017 Published
Empire Technology Development LLC	United States of America		14/334,906	Jul 18, 2014 Allowed
Empire Technology Development LLC	China		201510422966.9	Jul 17, 2015 Published
Empire Technology Development LLC	United States of America	9813203	14/302434	Jun 12, 2014 Issued
Empire Technology Development LLC	China		201510320709.4	Jun 12, 2015 Published
Empire Technology Development LLC	United States of America	9646699	14/404002	Nov 25, 2014 Issued
Empire Technology Development LLC	United States of America		14/487,114	Sep 16, 2014 Allowed
Empire Technology Development LLC	Republic of Korea	10-1669525	10-2015-0130959	Sep 16, 2015 Issued
Empire Technology Development LLC	China		201510590527.9	Sep 16, 2015 Published
Empire Technology Development LLC	United States of America		14/430,757	Mar 24, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America		15/545,448	Jul 21, 2017 Published
Empire Technology Development LLC	Republic of Korea	10-1871032	10-2015-0159735	Nov 13, 2015 Issued
Empire Technology Development LLC	United States of America		14/574,068	Dec 17, 2014 Published
Empire Technology Development LLC	United States of America	10037612	14/980692	Dec 28, 2015 Issued
Empire Technology Development LLC	United States of America		15/157,557	May 18, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	9347475	14/110919	Oct 9, 2013 Issued
Empire Technology Development LLC	United States of America	9188142	13/445805	Apr 12, 2012 Issued
Empire Technology Development LLC	United States of America	9422958	13/583540	Sep 7, 2012 Issued
Empire Technology Development LLC	United States of America	9506494	14/117618	Nov 13, 2013 Issued
Empire Technology Development LLC	China	ZL201280071816.2	201280071816.2	Jan 26, 2012 Issued
Empire Technology Development LLC	Australia	2012367292	2012367292	Jan 26, 2012 Issued
Empire Technology Development LLC	United States of America	9253857	13/509351	May 11, 2012 Issued
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Empire Technology Development LLC	Japan	5669982	2014-503664	Mar 5, 2012 Issued
Empire Technology Development LLC	United States of America	9693426	14/975690	Dec 18, 2015 Issued
Empire Technology Development LLC	Germany		11/201200517.1	Mar 5, 2012 Published
Empire Technology Development LLC	Republic of Korea	10-1813750	10-2014-7027641	Apr 26, 2012 Issued
Empire Technology Development LLC	United States of America	9734144	14/891810	Nov 17, 2015 Issued
Empire Technology Development LLC	European Patent Office		14902019.0	Sep 18, 2014 Published
Empire Technology Development LLC	United States of America	9658877	13/003222	Jan 7, 2011 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1537831	100125893	Jul 20, 2011 Issued
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Empire Technology Development LLC	Republic of Korea	10-1480856	10-2013-7007485	Aug 23, 2010 Issued

Empire Technology Development LLC	Germany	112010005821.0	Aug 23, 2010 Published
Empire Technology Development LLC	United States of America	8384303 12/7/10508	Feb 23, 2010 Issued
Empire Technology Development LLC	China	9153356 12/7/14482	Feb 27, 2010 Issued
Empire Technology Development LLC	United States of America	ZL201080064465.3 201080064465.3	May 21, 2010 Issued
Empire Technology Development LLC	Republic of Korea	8578020 12/647256	Dec 24, 2009 Issued
Empire Technology Development LLC	Japan	10-1365260 10-2012-7015291	Dec 13, 2010 Issued
Empire Technology Development LLC	Japan	ZL201080052090.9 201080052090.9	Dec 13, 2010 Issued
Empire Technology Development LLC	United States of America	5483778 2012-544445	Dec 13, 2010 Issued
Empire Technology Development LLC	United States of America	9629012 13/003235	Jan 7, 2011 Issued
Empire Technology Development LLC	United States of America	10085178 15/489111	Apr 17, 2017 Issued
Empire Technology Development LLC	United States of America	8951598 12/992120	Nov 11, 2010 Issued
Empire Technology Development LLC	United States of America	1046088 14/606672	Jan 27, 2015 Issued
Empire Technology Development LLC	United States of America	9079127 13/140328	Jun 16, 2011 Issued
Empire Technology Development LLC	China	ZL201080067234.8 201080067234.8	Jun 4, 2010 Issued
Empire Technology Development LLC	Japan	5688451 2013-513141	Jun 4, 2010 Issued
Empire Technology Development LLC	United States of America	8478009 12/971140	Aug 11, 2010 Issued
Empire Technology Development LLC	China	9264520 12/867177	Aug 11, 2010 Issued
Empire Technology Development LLC	Japan	ZL201080066273.6 201080066273.6	Aug 11, 2010 Issued
Empire Technology Development LLC	Republic of Korea	5595584 2013-504856	Aug 11, 2010 Issued
Empire Technology Development LLC	United States of America	10-1436340 10-2012-7028776	Aug 11, 2010 Issued
Empire Technology Development LLC	United States of America	9220921 13/063428	Aug 11, 2010 Issued
Empire Technology Development LLC	United States of America	8435312 13/123612	Aug 11, 2010 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I470864 10/137921	Oct 19, 2011 Issued
Empire Technology Development LLC	United States of America	8657528 13/062936	Mar 8, 2011 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I451484 09/135191	Oct 15, 2010 Issued
Empire Technology Development LLC	United States of America	9245765 13/394812	Mar 8, 2012 Issued
Empire Technology Development LLC	China	ZL201080045950.6 201080045950.6	Oct 14, 2010 Issued
Empire Technology Development LLC	Japan	5718342 2012-534145	Oct 14, 2010 Issued
Empire Technology Development LLC	United States of America	8273175 13/392800	Feb 27, 2012 Issued
Empire Technology Development LLC	Japan	5374648 2012-536760	Sep 28, 2010 Issued
Empire Technology Development LLC	United States of America	8719927 13/054867	Jan 19, 2011 Issued
Empire Technology Development LLC	China	ZL201080069292.4 201080069292.4	Sep 28, 2010 Issued
Empire Technology Development LLC	European Patent Office	2622807 10857961.6	Sep 28, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1445116 10-2013-7010164	Sep 28, 2010 Issued
Empire Technology Development LLC	Germany	2622807 602010031521.5	Sep 28, 2010 Issued
Empire Technology Development LLC	France	2622807 10857961.6	Sep 28, 2010 Issued

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Empire Technology Development LLC	United Kingdom	2622807	10857961.6	Sep 28, 2010 Issued
Empire Technology Development LLC	United States of America	8642183	13/575549	Jul 26, 2012 Issued
Empire Technology Development LLC	Republic of Korea	8804527	13/264675	Oct 14, 2011 Issued
Empire Technology Development LLC	United States of America	10-1578746	10-2013-7022271	Apr 21, 2011 Issued
Empire Technology Development LLC	Japan	5993051	9148760	14/321300 Jul 1, 2014 Issued
Empire Technology Development LLC	United States of America	10-1689242	20-15-046017	Apr 21, 2011 Marked for Impairing
Empire Technology Development LLC	China	10-2015-7035354	15/837,304	Apr 21, 2011 Published
Empire Technology Development LLC	United States of America	20-180069059.0	14/830268	Dec 11, 2017 Issued
Empire Technology Development LLC	United States of America	201180070777.X	13/389586	Feb 8, 2012 Published
Empire Technology Development LLC	China	ZL201180070777.X	13/389586	Jun 22, 2011 Issued
Empire Technology Development LLC	United States of America	9558518	13/643273	Oct 24, 2012 Issued
Empire Technology Development LLC	United States of America	15/382,816	201180070777.X	Dec 19, 2016 Published
Empire Technology Development LLC	United States of America	8670723	13/579248	Aug 15, 2012 Issued
Empire Technology Development LLC	United States of America	8897716	14/154850	Jan 14, 2014 Issued
Empire Technology Development LLC	China	201280071261.1	201280071261.1	Mar 8, 2012 Issued
Empire Technology Development LLC	Japan	5847966	2014-560895	Mar 8, 2012 Published
Empire Technology Development LLC	Republic of Korea	10-1819791	10-2014-7028026	Mar 8, 2012 Issued
Empire Technology Development LLC	United States of America	9507997	14/492814	Sep 22, 2014 Issued
Empire Technology Development LLC	European Patent Office	12870846.8	13/700836	Mar 8, 2012 Published
Empire Technology Development LLC	United States of America	9274870	13/994438	Nov 29, 2012 Issued
Empire Technology Development LLC	United States of America	8771242	13/994438	Jun 14, 2013 Issued
Empire Technology Development LLC	United States of America	8771241	13/939915	Jul 11, 2013 Issued
Empire Technology Development LLC	United States of America	9594714	14/001174	Aug 23, 2013 Issued
Empire Technology Development LLC	United States of America	9501437	14/124007	Dec 5, 2013 Issued
Empire Technology Development LLC	United States of America	9542402	14/000527	Aug 20, 2013 Issued
Empire Technology Development LLC	United States of America	14/353,494	2008-291645	Apr 23, 2014 Published
Empire Technology Development LLC	United States of America	9563363	14/435747	Apr 15, 2015 Issued
Empire Technology Development LLC	United States of America	8694932	12/200271	Aug 28, 2008 Issued
Empire Technology Development LLC	Japan	4878049	2008-291645	Nov 14, 2008 Issued
Empire Technology Development LLC	United States of America	5394044	8745047	12/200438 Aug 28, 2008 Issued
Empire Technology Development LLC	Japan	102008058862	102008058862.8	Nov 26, 2008 Issued
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Empire Technology Development LLC	Japan	5119129	2008-291636	Nov 14, 2008 Issued

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Empire Technology Development LLC	United States of America	5107211	8655820 12/200043	Aug 28, 2008 Issued
Empire Technology Development LLC	Japan	9095274	2008-291641	Nov 14, 2008 Issued
Empire Technology Development LLC	United States of America	8850180	12/201298	Aug 31, 2008 Issued
Empire Technology Development LLC	United States of America	8195682	12/201329	Aug 29, 2008 Issued
Empire Technology Development LLC	United States of America	8838370	12/400631	Aug 29, 2008 Issued
Empire Technology Development LLC	European Patent Office	2228779	9927254 14/457298	Mar 9, 2009 Issued
Empire Technology Development LLC	United States of America	2228779	602010030296.2	Mar 5, 2010 Issued
Empire Technology Development LLC	Germany	2228779	10155669.4	Mar 5, 2010 Issued
Empire Technology Development LLC	France	2228779	10155669.4	Mar 5, 2010 Issued
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Empire Technology Development LLC	United States of America	8582502	12/478614	Mar 26, 2018 Published
Empire Technology Development LLC	China	ZL201080024699.5	201080024699.5	REEL: 048373 FRAME: 0351
Empire Technology Development LLC	United States of America	10-1346210	10-2012-7000225	Jun 4, 2009 Issued
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Empire Technology Development LLC	United States of America	8830912	14/063003	Oct 25, 2013 Issued
Empire Technology Development LLC	United States of America	8570938	12/201403	Jun 3, 2010 Issued
Empire Technology Development LLC	United States of America	8126486	12/201381	Jun 3, 2010 Issued
Empire Technology Development LLC	United States of America	8577296	12/201415	Aug 29, 2008 Issued
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Empire Technology Development LLC	Japan	5410947	2009-287071	Feb 23, 2009 Issued
Empire Technology Development LLC	United States of America	8694519	12/396939	Dec 18, 2009 Issued
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Empire Technology Development LLC	Japan	9427192	14/256575	Apr 18, 2014 Issued
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Empire Technology Development LLC	Republic of Korea	10-1240884	10-2009-0115563	Nov 27, 2009 Issued
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Empire Technology Development LLC	United States of America	15/839,200		Dec 1, 2017 Published
Empire Technology Development LLC	United States of America	8144613	12/467919	May 18, 2009 Issued
Empire Technology Development LLC	United States of America	8948806	12/497242	Jul 2, 2009 Issued
Empire Technology Development LLC	United States of America	8223664	12/542096	Aug 17, 2009 Issued

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Empire Technology Development LLC	United States of America	8099057	12/431912	Apr 29, 2009 Issued
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Empire Technology Development LLC	United States of America	8897263	13/655471	Jan 23, 2009 Issued
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Empire Technology Development LLC	United Kingdom	2241979	10154704.0	Feb 25, 2010 Issued
Empire Technology Development LLC	France	2241979	10154704.0	Feb 25, 2010 Issued
Empire Technology Development LLC	United States of America	8223889	12/351697	Jan 9, 2009 Issued

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Empire Technology Development LLC	Republic of Korea	10-1388735	10-2009-0134698	Dec 30, 2009 Issued
Empire Technology Development LLC	Germany		102009055418.1	Dec 30, 2009 Published
Empire Technology Development LLC	United States of America	9189448	12/545063	Aug 20, 2009 Issued
Empire Technology Development LLC	United States of America	8180963	12/470256	May 21, 2009 Issued
Empire Technology Development LLC	United States of America	9262628	12/557845	Sep 11, 2009 Issued
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Empire Technology Development LLC	United States of America	9178694	14/256616	Apr 18, 2014 Issued
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Empire Technology Development LLC	United States of America	8266256	12/506383	Jul 21, 2009 Issued	Jul 21, 2009 Issued
Empire Technology Development LLC	United States of America	5249470	2012-521639	Jun 3, 2010 Issued	Jun 3, 2010 Issued
Empire Technology Development LLC	United States of America	8335854	12/506391	Jul 21, 2009 Issued	Jul 21, 2009 Issued
Empire Technology Development LLC	Japan	5356597	2012-521640	Jun 3, 2010 Issued	Jun 3, 2010 Issued
Empire Technology Development LLC	United States of America	9524194	13/677770	Nov 15, 2012 Issued	Nov 15, 2012 Issued
Empire Technology Development LLC	United States of America	8075980	12/465711	May 14, 2009 Issued	May 14, 2009 Issued
Empire Technology Development LLC	Japan	5414510	2009-290656	Dec 22, 2009 Issued	Dec 22, 2009 Issued
Empire Technology Development LLC	China	ZL201080021049.5	201080021049.5	May 13, 2010 Issued	May 13, 2010 Issued
Empire Technology Development LLC	Germany	112010001985	112010001985.1	May 13, 2010 Issued	May 13, 2010 Issued
Empire Technology Development LLC	United States of America	8273425	12/465717	May 14, 2009 Issued	May 14, 2009 Issued
Empire Technology Development LLC	Japan	5398906	2012-511005	May 13, 2010 Issued	May 13, 2010 Issued
Empire Technology Development LLC	European Patent Office		1077525.8	May 13, 2010 Published	May 13, 2010 Published
Empire Technology Development LLC	United States of America		8676668	12/540324	Aug 12, 2009 Issued

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COBB_029448

Empire Technology Development LLC	United States of America	9852435	14/199329	Mar 6, 2014 Issued
Empire Technology Development LLC	United States of America	8297444	12/546516	Dec 22, 2017 Published
Empire Technology Development LLC	Republic of Korea	10-1365259	10-2012-7006610	Aug 24, 2009 Issued
Empire Technology Development LLC	Japan	5323263	2012-525755	Aug 23, 2010 Issued
Empire Technology Development LLC	United States of America	8173060	12/426097	Apr 17, 2009 Issued
Empire Technology Development LLC	United States of America	8459976	13/432821	Mar 28, 2012 Issued
Empire Technology Development LLC	United States of America	8343585	12/478661	Jun 4, 2009 Issued
Empire Technology Development LLC	United States of America	8710153	13/685181	Nov 26, 2012 Issued
Empire Technology Development LLC	United States of America	8370787	12/547382	Aug 25, 2009 Issued
Empire Technology Development LLC	United States of America	8286120	12/541098	Aug 13, 2009 Issued
Empire Technology Development LLC	United States of America	8555236	13/648274	Oct 9, 2012 Issued
Empire Technology Development LLC	United States of America	7898283	12/551209	Aug 31, 2009 Issued
Empire Technology Development LLC	United States of America	8054098	12/984275	Jan 4, 2011 Issued
Empire Technology Development LLC	United States of America	8176454	12/550119	Aug 28, 2009 Issued
Empire Technology Development LLC	United States of America	8387071	12/550132	Aug 28, 2009 Issued
Empire Technology Development LLC	Republic of Korea	10-1340497	10-2012-7007920	Aug 10, 2010 Issued
Empire Technology Development LLC	Japan	5485397	2012-526816	Aug 10, 2010 Issued
Empire Technology Development LLC	Japan	5695171	2013-255634	Dec 11, 2013 Issued
Empire Technology Development LLC	European Patent Office		10812482.7	Aug 10, 2010 Published
Empire Technology Development LLC	United States of America	8176448	12/479665	Jun 5, 2009 Issued
Empire Technology Development LLC	United States of America	9104435	12/423374	Apr 14, 2009 Issued
Empire Technology Development LLC	European Patent Office	2241969	10154705.7	Feb 25, 2010 Issued
Empire Technology Development LLC	France	2241969	602010053087.6	Feb 25, 2010 Issued
Empire Technology Development LLC	Germany	2241969	10154705.7	Feb 25, 2010 Issued
Empire Technology Development LLC	United Kingdom	2241969	10154705.7	Feb 25, 2010 Issued
Empire Technology Development LLC	United States of America	8112649	14/752,787	Jun 26, 2015 Published
Empire Technology Development LLC	United States of America	5473647	2010-024990	Mar 17, 2009 Issued
Empire Technology Development LLC	Japan		Feb 8, 2010 Issued	
Empire Technology Development LLC	United States of America	8381112	12/481554	Jun 9, 2009 Issued
Empire Technology Development LLC	United States of America	8401560	12/479565	Jun 5, 2009 Issued
Empire Technology Development LLC	United States of America	9125066	13/742944	Jan 16, 2013 Issued
Empire Technology Development LLC	United States of America	9154964	13/742927	Jan 16, 2013 Issued
Empire Technology Development LLC	United States of America	9759800	14/805870	Jul 22, 2015 Issued
Empire Technology Development LLC	United States of America	8369242	12/415518	Mar 31, 2009 Issued
Empire Technology Development LLC	United States of America	8744485	13/728489	Dec 27, 2012 Issued

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REEL: 048373 FRAME: 0358**

COBB_029449

Empire Technology Development LLC	United States of America	8712421	13/728674	Dec 27, 2012 Issued
Empire Technology Development LLC	United States of America	8054762	12/415523	Mar 31, 2009 Issued
Empire Technology Development LLC	United States of America	8443034	12/479584	Jun 5, 2009 Issued
Empire Technology Development LLC	United States of America	8417754	12/463984	May 11, 2009 Issued
Empire Technology Development LLC	China	ZL201080020725.7	201080020725.7	May 7, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1377869	10-2011-7029641	May 7, 2010 Published
Empire Technology Development LLC	United States of America	8620982	13/855421	Apr 2, 2013 Issued
Empire Technology Development LLC	United States of America	8788559	14/095252	Dec 3, 2013 Issued
Empire Technology Development LLC	European Patent Office	10775302.2		Jun 2, 2014 Issued
Empire Technology Development LLC	United States of America	8532642	12/415027	Oct 16, 2015 Issued
Empire Technology Development LLC	United States of America	8744429	13/941853	Apr 24, 2018 Published
Empire Technology Development LLC	United States of America	9177311	14/293376	Apr 17, 2009 Issued
Empire Technology Development LLC	United States of America	9986435	14/885515	Feb 3, 2014 Issued
Empire Technology Development LLC	United States of America	15/961,575		Mar 5, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8661443	12/426139	May 11, 2009 Issued
Empire Technology Development LLC	United States of America	9471376	14/171323	May 4, 2010 Published
Empire Technology Development LLC	European Patent Office	10156500.0		May 4, 2010 Issued
Empire Technology Development LLC	United States of America	8260708	12/426141	Jul 12, 2012 Issued
Empire Technology Development LLC	United States of America	9177119	13/547194	May 4, 2010 Issued
Empire Technology Development LLC	European Patent Office	10156500.0		May 4, 2010 Published
Empire Technology Development LLC	United States of America	8041992	12/463982	May 4, 2010 Issued
Empire Technology Development LLC	United States of America	ZL201080025570.6	201080025570.6	May 4, 2010 Issued
Empire Technology Development LLC	China	10-1268888	10-2011-7029605	May 4, 2010 Published
Empire Technology Development LLC	Republic of Korea	112010001965.7		May 4, 2010 Published
Empire Technology Development LLC	Germany			May 4, 2010 Published
Empire Technology Development LLC	United States of America	8255743	12/463979	May 11, 2009 Issued
Empire Technology Development LLC	United States of America	8566638	13/584277	Aug 13, 2012 Issued
Empire Technology Development LLC	China	8111149	12/433696	Apr 30, 2009 Issued
Empire Technology Development LLC	United States of America	ZL201080029795.9	201080029795.9	Apr 29, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1268887	10-2011-7028379	Apr 29, 2010 Issued
Empire Technology Development LLC	Japan	5319839	2012-508738	Apr 29, 2010 Issued
Empire Technology Development LLC	United States of America	8145943	12/463977	May 11, 2009 Issued
Empire Technology Development LLC	China	ZL201080028170.0	201080028170.0	May 4, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1312551	10-2011-7029606	May 4, 2010 Issued
Empire Technology Development LLC	Germany	112010001971.1	112010001971.1	May 4, 2010 Published
Empire Technology Development LLC	United States of America	8667109	12/433700	Apr 30, 2009 Issued
Empire Technology Development LLC	China	ZL201080023939.X	201080023939.X	Apr 29, 2010 Issued

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REEL: 048373 FRAME: 0359**

COBB_029450

Empire Technology Development LLC	Republic of Korea	10-1271471	10-2011-7028380	Apr 29, 2010 Issued
Empire Technology Development LLC	Japan	5575879	2012-508739	Apr 29, 2010 Issued
Empire Technology Development LLC	United States of America	9537709	14/192073	Feb 27, 2014 Issued
Empire Technology Development LLC	United States of America	9825803	15/350721	Nov 14, 2016 Issued
Empire Technology Development LLC	United States of America	10122570	15/817568	Nov 20, 2017 Issued
Empire Technology Development LLC	United States of America	16/180,193		Nov 5, 2018 Pending
Empire Technology Development LLC	United States of America	8675538	12/433706	Apr 30, 2009 Issued
Empire Technology Development LLC	China	ZL201080025249.8	201080025249.8	Apr 29, 2010 Issued
Empire Technology Development LLC	United States of America	8850281	12/464384	Apr 29, 2010 Issued
Empire Technology Development LLC	United States of America	9547642	12/486446	May 12, 2009 Issued
Empire Technology Development LLC	United States of America	9032476	12/464387	May 12, 2009 Issued
Empire Technology Development LLC	United States of America	8379856	12/486451	May 12, 2009 Issued
Empire Technology Development LLC	China	ZL201080026651.8	201080026651.8	May 12, 2009 Issued
Empire Technology Development LLC	United States of America	10-1336004	10-2012-7001357	Jun 17, 2009 Issued
Empire Technology Development LLC	United States of America	9275392	12/496992	Jun 9, 2010 Issued
Empire Technology Development LLC	United States of America	8428254	12/415060	Jul 2, 2009 Issued
Empire Technology Development LLC	Japan	5694325	2012-524713	Jan 15, 2016 Published
Empire Technology Development LLC	Republic of Korea	10-1346211	10-2012-7006592	Mar 31, 2009 Issued
Empire Technology Development LLC	United States of America	8706131	12/487054	Jun 7, 2010 Issued
Empire Technology Development LLC	United States of America	8738949	12/551550	Jun 7, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1372623	10-2012-7002125	Jun 7, 2010 Issued
Empire Technology Development LLC	United States of America	9915994	14/281899	Jun 7, 2010 Issued
Empire Technology Development LLC	United States of America	8052784	12/434414	Jun 18, 2009 Issued
Empire Technology Development LLC	United States of America	8068867	12/416160	Aug 31, 2009 Issued
Empire Technology Development LLC	United States of America	8374091	12/411405	Jun 10, 2010 Issued
Empire Technology Development LLC	United States of America	8705367	13/738948	May 20, 2014 Issued
Empire Technology Development LLC	United States of America	15/707,572		May 1, 2009 Issued
Empire Technology Development LLC	United States of America	8064360	12/358258	Apr 1, 2009 Issued
Empire Technology Development LLC	United States of America	8559329	13/275299	Mar 26, 2009 Issued
Empire Technology Development LLC	United States of America	9148807	14/037403	Jan 10, 2013 Issued
Empire Technology Development LLC	United States of America	9781031	14/855386	Sep 18, 2017 Allowed
Empire Technology Development LLC	United States of America	8407011	12/534393	Jan 23, 2009 Issued
Empire Technology Development LLC	United States of America	9182321	13/771523	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	8318528	12/506079	Sep 26, 2013 Issued
				Sep 16, 2015 Issued
				Aug 3, 2009 Issued
				Feb 20, 2013 Issued
				Jul 20, 2009 Issued

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REEL: 048373 FRAME: 0360**

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Empire Technology Development LLC	United States of America	9142699 13/654130	Oct 17, 2012 Issued
Empire Technology Development LLC	United States of America	8195888 12/408075	Mar 20, 2009 Issued
Empire Technology Development LLC	China	ZL201010124320.X 201010124320.X	Feb 26, 2010 Issued
Empire Technology Development LLC	United States of America	8719165 12/502132	Jul 13, 2009 Issued
Empire Technology Development LLC	United States of America	8281034 12/502124	Jul 13, 2009 Issued
Empire Technology Development LLC	United States of America	9210216 13/598278	Aug 29, 2012 Issued
Empire Technology Development LLC	United States of America	15/428,804	Feb 9, 2017 Published
Empire Technology Development LLC	United States of America	8856794 12/578321	Oct 13, 2009 Issued
Empire Technology Development LLC	United States of America	8635606 12/578336	Oct 13, 2009 Issued
Empire Technology Development LLC	United States of America	8892931 12/582301	Oct 20, 2009 Issued
Empire Technology Development LLC	United States of America	8559307 12/648124	Dec 28, 2009 Issued
Empire Technology Development LLC	Japan	5226714 2010-052437	Mar 10, 2010 Issued
Empire Technology Development LLC	United States of America	9191341 14/021940	Sep 9, 2013 Issued
Empire Technology Development LLC	United States of America	8244986 12/649659	Dec 30, 2009 Issued
Empire Technology Development LLC	United States of America	8407426 13/410526	Mar 2, 2012 Issued
Empire Technology Development LLC	Japan	5525064 2012-545934	Sep 24, 2010 Issued
Empire Technology Development LLC	Japan	5747099 2014-080607	Apr 9, 2014 Issued
Empire Technology Development LLC	Germany	112010005073.2	Sep 24, 2010 Published
Empire Technology Development LLC	United States of America	8492339 12/605744	Oct 26, 2009 Issued
Empire Technology Development LLC	European Patent Office	10828749.1	Oct 15, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8093313 12/606771	Oct 27, 2009 Issued
Empire Technology Development LLC	United States of America	15/600,583	May 19, 2017 Published
Empire Technology Development LLC	United States of America	9858393 12/997862	Dec 13, 2010 Issued
Empire Technology Development LLC	United States of America	9013991 12/643868	Dec 21, 2009 Issued
Empire Technology Development LLC	United States of America	8904114 12/624833	Nov 24, 2009 Issued
Empire Technology Development LLC	United States of America	8549339 12/713220	Feb 26, 2010 Issued
Empire Technology Development LLC	Japan	5547820 2012-553946	Feb 11, 2011 Issued
Empire Technology Development LLC	China	ZL201180005030.6 201180005030.6	Feb 11, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1426341 10-2012-7024888	Feb 11, 2011 Issued
Empire Technology Development LLC	Germany	112011100695.0	Feb 11, 2011 Marked for Impairing
Empire Technology Development LLC	Japan	5559891 2012-542245	Dec 8, 2010 Issued
Empire Technology Development LLC	Germany	112010004717.0	Dec 8, 2010 Published
Empire Technology Development LLC	United States of America	8667227 12/644658	Dec 22, 2009 Issued
Empire Technology Development LLC	Japan	5550742 2012-545935	Sep 24, 2010 Issued
Empire Technology Development LLC	Germany	112010004972.6	Sep 24, 2010 Published

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REEL: 048373 FRAME: 0361

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Empire Technology Development LLC	United States of America	5589091	9367462 12/648529	Dec 29, 2009 Issued
Empire Technology Development LLC	Japan		2012-546192	Dec 22, 2010 Issued
Empire Technology Development LLC	Germany		112010005041.4	Dec 22, 2010 Published
Empire Technology Development LLC	United States of America	8874855	12/648092	Dec 28, 2009 Issued
Empire Technology Development LLC	United States of America	8392342	12/621424	Nov 18, 2009 Issued
Empire Technology Development LLC	United States of America	8886577	13/747309	Jan 22, 2013 Issued
Empire Technology Development LLC	United States of America	8473438	12/996010	Dec 2, 2010 Issued
Empire Technology Development LLC	United States of America	8868476	13/923250	Jun 20, 2013 Issued
Empire Technology Development LLC	United States of America	8458489	12/732012	Mar 25, 2010 Issued
Empire Technology Development LLC	United States of America	9020150	13/887361	May 5, 2013 Issued
Empire Technology Development LLC	United States of America	8427346	12/996972	Dec 8, 2010 Issued
Empire Technology Development LLC	United States of America	8327358	12/635319	Dec 10, 2009 Issued
Empire Technology Development LLC	Japan	5032606	2010-024988	Feb 8, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1094675	10-2010-0017262	Feb 25, 2010 Issued
Empire Technology Development LLC	European Patent Office	2333663	10152865.1	Feb 8, 2010 Issued
Empire Technology Development LLC	United Kingdom	2333663	10152865.1	Feb 8, 2010 Issued
Empire Technology Development LLC	Germany	2333663	602010019509.0	Feb 8, 2010 Issued
Empire Technology Development LLC	France	2333663	10152865.1	Feb 8, 2010 Issued
Empire Technology Development LLC	United States of America	8751854	12/642871	Dec 21, 2009 Issued
Empire Technology Development LLC	United States of America	9519305	14/294146	Jun 3, 2014 Issued
Empire Technology Development LLC	United States of America	9292893	12/635147	Dec 10, 2009 Issued
Empire Technology Development LLC	United States of America	15/049,585		Feb 22, 2016 Published
Empire Technology Development LLC	United States of America	8234431	12/578270	Oct 13, 2009 Issued
Empire Technology Development LLC	European Patent Office	2488953	10823917.9	Oct 12, 2010 Issued
Empire Technology Development LLC	Japan	5492305	2012-534273	Oct 12, 2010 Issued
Empire Technology Development LLC	United Kingdom	2488953	10823917.9	Oct 12, 2010 Issued
Empire Technology Development LLC	Germany	2488953	602010038518.3	Oct 12, 2010 Issued
Empire Technology Development LLC	France	2488953	10823917.9	Oct 12, 2010 Issued
Empire Technology Development LLC	European Patent Office		10816031.8	Sep 8, 2010 Published
Empire Technology Development LLC	United States of America	5442129	8473818 12/57378	Oct 12, 2009 Issued
Empire Technology Development LLC	Japan		2012-534183	May 28, 2010 Issued
Empire Technology Development LLC	Germany		112010004006.0	May 28, 2010 Published
Empire Technology Development LLC	United States of America	9262589	13/519309	Jun 26, 2012 Issued
Empire Technology Development LLC	United States of America	14/987,077	Jan 4, 2016 Published	Dec 5, 2012 Issued
Empire Technology Development LLC	United States of America	9513329	13/702267	Jul 30, 2010 Issued
Empire Technology Development LLC	China	ZL201080067611.8	201080067611.8	

Empire Technology Development LLC	United States of America	9053029	13/702547	Dec 6, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1629879	10-2014-7025145	Feb 6, 2012 Issued
Empire Technology Development LLC	United States of America	8365131	12/685114	Jan 11, 2010 Issued
Empire Technology Development LLC	United States of America	8656338	13/751811	Jan 28, 2013 Issued
Empire Technology Development LLC	United States of America	8434674	13/058831	Feb 11, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1399248	10-2012-7028937	Jul 29, 2010 Issued
Empire Technology Development LLC	Japan	5635689	2013-516559	Jul 29, 2010 Issued
Empire Technology Development LLC	United States of America	8048288	12/625962	Nov 25, 2009 Issued
Empire Technology Development LLC	Japan	5145484	2012-539088	Nov 24, 2010 Issued
Empire Technology Development LLC	China	ZL201080052414.9	201080052414.9	Nov 24, 2010 Issued
Empire Technology Development LLC	European Patent Office	8163159	12/626017	Nov 24, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8371128	12/620477	Nov 25, 2009 Issued
Empire Technology Development LLC	United States of America	8441775	12/638224	Dec 15, 2009 Issued
Empire Technology Development LLC	China	ZL201080056767.6	201080056767.6	Dec 14, 2010 Issued
Empire Technology Development LLC	United States of America	8417340	12/577909	Oct 13, 2009 Issued
Empire Technology Development LLC	United States of America	9002456	13/785861	Mar 5, 2013 Issued
Empire Technology Development LLC	United States of America	8802792	13/145291	Jul 19, 2011 Issued
Empire Technology Development LLC	United States of America	8818711	12/642355	Dec 18, 2009 Issued
Empire Technology Development LLC	China	ZL201080051349.8	201080051349.8	May 28, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1452602	10-2012-7010763	May 28, 2010 Issued
Empire Technology Development LLC	Japan	5496359	2012-543089	May 28, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1562485	10-2014-7005271	Feb 27, 2014 Issued
Empire Technology Development LLC	Brazil		BR112012014599.1	May 28, 2010 Pending
Empire Technology Development LLC	United States of America	9424583	12/579718	Oct 15, 2009 Issued
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Empire Technology Development LLC	Republic of Korea	10-1097215	10-2010-0003456	Jan 14, 2010 Issued
Empire Technology Development LLC	United States of America	9682156	12/580940	Oct 16, 2009 Issued
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Empire Technology Development LLC	Japan	5793503	2012-538828	Oct 13, 2010 Issued
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Empire Technology Development LLC	United States of America	9481160	14/047544	Oct 7, 2013 Issued
Empire Technology Development LLC	France	2499204	10830395.9	Oct 13, 2010 Issued
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Empire Technology Development LLC	Germany	2499204	602010046948.4	Oct 13, 2010 Issued

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REEL: 048373 FRAME: 0363**

COBB_029454

Empire Technology Development LLC	United States of America	9001252	12/611083	Nov 2, 2009 Issued
Empire Technology Development LLC	United States of America	8214344	14/644,957	Mar 11, 2015 Published
Empire Technology Development LLC	China	ZL20180004870.0	201180004870.0	Mar 16, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1356310	10-2012-7013481	Mar 7, 2011 Issued
Empire Technology Development LLC	Japan	5426779	2012-546268	Mar 7, 2011 Issued
Empire Technology Development LLC	United States of America	8495051	13/479676	May 24, 2012 Issued
Empire Technology Development LLC	United States of America	9201970	13/919705	Jun 17, 2013 Issued
Empire Technology Development LLC	United States of America	14/851,226		Sep 11, 2015 Published
Empire Technology Development LLC	China		201610082319.2	Mar 7, 2011 Published
Empire Technology Development LLC	United States of America	8695353	12/641153	Dec 6, 2010 Issued
Empire Technology Development LLC	China	ZL201080060880.1	201080060880.1	Dec 17, 2009 Issued
Empire Technology Development LLC	United States of America	8855751	12/714011	Feb 26, 2010 Issued
Empire Technology Development LLC	United States of America	8700663	12/536411	Aug 5, 2009 Issued
Empire Technology Development LLC	United States of America	8317901	12/714078	Feb 26, 2010 Issued
Empire Technology Development LLC	China	ZL201080064573.0	201080064573.0	Aug 25, 2010 Issued
Empire Technology Development LLC	Japan	5671068	2012-553869	Aug 25, 2010 Issued
Empire Technology Development LLC	European Patent Office		10846780.4	Aug 25, 2010 Published
Empire Technology Development LLC	United States of America	8611069	12/999250	Dec 15, 2010 Issued
Empire Technology Development LLC	China	ZL201080066798.X	201080066798.X	May 18, 2010 Issued
Empire Technology Development LLC	Japan	5683688	2013-510064	May 18, 2010 Issued
Empire Technology Development LLC	United States of America	9123477	14/073449	Nov 6, 2013 Issued
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Empire Technology Development LLC	United States of America	8304947	12/997503	Jun 21, 2010 Issued
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Empire Technology Development LLC	Japan	5653459	2012-554985	Oct 22, 2010 Issued
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Empire Technology Development LLC	United States of America	8610771	12/719797	Mar 8, 2010 Issued
Empire Technology Development LLC	China	ZL201180005006.2	201180005006.2	Feb 25, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1476513	10-2012-7014570	Feb 25, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1445996	10-2013-7022640	Aug 27, 2013 Issued
Empire Technology Development LLC	United States of America	9390503	14/094623	Dec 2, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1677813	10-2014-7002052	Jan 24, 2014 Issued
Empire Technology Development LLC	United States of America	8386403	12/716084	Mar 2, 2010 Issued
Empire Technology Development LLC	Japan	5670484	2012-555014	Jan 31, 2011 Issued

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REEL: 048373 FRAME: 0364

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Empire Technology Development LLC	Republic of Korea	10-1387973	10-2012-7025390	Jan 31, 2011 Issued
Empire Technology Development LLC	Germany	8238514	12/640705	Jan 31, 2011 Published
Empire Technology Development LLC	United States of America	8866845	12/720858	Dec 17, 2009 Issued
Empire Technology Development LLC	China	ZL201180004985.X	201180004985.X	Mar 10, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1453630	10-2012-7013372	Feb 25, 2011 Issued
Empire Technology Development LLC	Japan	5520387	2012-543348	Feb 25, 2011 Issued
Empire Technology Development LLC	United States of America	8442502	12/715868	Mar 2, 2010 Issued
Empire Technology Development LLC	China	ZL201180004879.1	201180004879.1	Feb 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1491582	10-2012-7014417	Feb 16, 2011 Issued
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Empire Technology Development LLC	Republic of Korea	10-1687460	10-2014-7005474	Feb 28, 2014 Issued
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Empire Technology Development LLC	China	ZL201180004866.4	201180004866.4	Feb 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-135286	10-2012-7013366	Feb 16, 2011 Issued
Empire Technology Development LLC	Japan	5346128	2012-548243	Feb 16, 2011 Issued
Empire Technology Development LLC	United States of America	8797356	13/787046	Mar 6, 2013 Issued
Empire Technology Development LLC	China	ZL201410305571.6	201410305571.6	Feb 16, 2011 Issued
Empire Technology Development LLC	United States of America	8821702	13/382498	Feb 16, 2011 Issued
Empire Technology Development LLC	United States of America	9606612	13/148167	Feb 16, 2011 Issued
Empire Technology Development LLC	China	ZL201080066831.9	201080066831.9	Jan 5, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1431366	10-2012-7028682	Aug 5, 2011 Issued
Empire Technology Development LLC	Japan	5512884	2013-513146	Jul 20, 2010 Issued
Empire Technology Development LLC	United States of America	8375161	12/717034	Jul 20, 2010 Issued
Empire Technology Development LLC	United States of America	10114008	15/112660	Jul 27, 2017 Published
Empire Technology Development LLC	United States of America	16137725		Mar 3, 2010 Issued
Empire Technology Development LLC	United States of America	8591413	12/714060	Jul 19, 2016 Issued
Empire Technology Development LLC	United States of America	8404199	12/999963	Sep 21, 2018 Pending
Empire Technology Development LLC	China	ZL201080067265.3	201080067265.3	Feb 26, 2010 Issued
Empire Technology Development LLC	Japan	5674927	2013-514142	Dec 17, 2010 Issued
Empire Technology Development LLC	United States of America	12/999,100		Jun 9, 2010 Issued
Empire Technology Development LLC	European Patent Office	10853003.1		Jun 9, 2010 Issued
Empire Technology Development LLC	United States of America	8262880	12/720221	Mar 9, 2010 Issued
Empire Technology Development LLC	China	ZL201180009199.9	201180009199.9	Feb 18, 2011 Issued

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COBB_029456

Empire Technology Development LLC	Japan	5607764	2012-555059	Feb 18, 2011 Issued
Empire Technology Development LLC	United States of America	8425748	13/572377	Aug 10, 2012 Issued
Empire Technology Development LLC	European Patent Office	8614663	11753779.5	Feb 18, 2011 Published
Empire Technology Development LLC	United States of America	10-1431351	201180005091.2	Mar 15, 2010 Issued
Empire Technology Development LLC	China	5421466	10-2012-7013373	Feb 7, 2011 Issued
Empire Technology Development LLC	Republic of Korea	9096783	13/058829	Feb 7, 2011 Issued
Empire Technology Development LLC	United States of America	ZL201080069072.1	201080069072.1	Feb 11, 2011 Issued
Empire Technology Development LLC	China	2616519	10857374.2	Sep 14, 2010 Issued
Empire Technology Development LLC	European Patent Office	2616519	10857374.2	Sep 14, 2010 Issued
Empire Technology Development LLC	United Kingdom	2616519	10857374.2	Sep 14, 2010 Issued
Empire Technology Development LLC	Germany	2616519	602010047869.6	Sep 14, 2010 Issued
Empire Technology Development LLC	France	2616519	10857374.2	Sep 14, 2010 Issued
Empire Technology Development LLC	United States of America	ZL 201080068518.9	8948016 12/999835	Dec 17, 2010 Issued
Empire Technology Development LLC	China	10-1420784	201080068518.9	Aug 6, 2010 Issued
Empire Technology Development LLC	Republic of Korea	5518262	10-2013-7005822	Aug 6, 2010 Issued
Empire Technology Development LLC	Japan	5518262	2013-523135	Aug 6, 2010 Issued
Empire Technology Development LLC	European Patent Office	8551257	10855710.9	Aug 6, 2010 Published
Empire Technology Development LLC	United States of America	ZL201080068495.1	201080068495.1	Dec 30, 2010 Issued
Empire Technology Development LLC	China	5579324	9238787 13/974972	Aug 6, 2010 Issued
Empire Technology Development LLC	Japan	5579324	2013-523137	Aug 6, 2010 Issued
Empire Technology Development LLC	United States of America	ZL201180004927.7	8259437 12/719651	Aug 23, 2013 Issued
Empire Technology Development LLC	China	10-1467068	201180004927.7	Mar 8, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1467068	10-2012-7014466	Mar 7, 2011 Issued
Empire Technology Development LLC	Japan	5465789	2012-543349	Mar 7, 2011 Issued
Empire Technology Development LLC	United States of America	8826771	12/881727	Sep 14, 2010 Issued
Empire Technology Development LLC	United States of America	8561454	13/202356	Aug 19, 2011 Issued
Empire Technology Development LLC	China	5669950	2013-534886	Oct 28, 2010 Issued
Empire Technology Development LLC	Japan	5669950	2013-534886	Oct 28, 2010 Issued
Empire Technology Development LLC	European Patent Office	8567232	10859075.3	Oct 28, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	ZL201080069829.7	201080069829.7	Oct 13, 2010 Issued
Empire Technology Development LLC	China	5469780	201080067920.5	Oct 28, 2010 Issued
Empire Technology Development LLC	Japan	5469780	2013-518364	Jul 9, 2010 Issued
Empire Technology Development LLC	United States of America	8192630	13/121175	Jul 9, 2010 Issued
Empire Technology Development LLC	United States of America	8834722	13/466868	Mar 25, 2011 Issued
Empire Technology Development LLC	United States of America	8834722	13/466868	May 8, 2012 Issued

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COBB_029457

Empire Technology Development LLC	United States of America	8368271	12/637780	Dec 15, 2009 Issued
Empire Technology Development LLC	China	ZL201080056762.3	201080056762.3	Oct 28, 2010 Issued
Empire Technology Development LLC	United States of America	8874849	13/498071	Mar 23, 2012 Issued
Empire Technology Development LLC	China	ZL201080066116.5	201080066116.5	Apr 21, 2010 Issued
Empire Technology Development LLC	Japan	5597306	2013-504876	Apr 21, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1414035	10-2012-7030081	Apr 21, 2010 Issued
Empire Technology Development LLC	United States of America	8152862	13/002272	Dec 30, 2010 Issued
Empire Technology Development LLC	United States of America	8192507	13/413490	Mar 6, 2012 Issued
Empire Technology Development LLC	Japan	5763766	2013-523138	Aug 6, 2010 Issued
Empire Technology Development LLC	China	ZL201080068472.0	201080068472.0	Aug 6, 2010 Issued
Empire Technology Development LLC	United States of America	8734628	12/720755	Mar 10, 2010 Issued
Empire Technology Development LLC	China	ZL201180009561.2	201180009561.2	Feb 17, 2011 Issued
Empire Technology Development LLC	European Patent Office	2545371	11753774.6	Feb 17, 2011 Issued
Empire Technology Development LLC	United States of America	9366648	14/253451	Feb 15, 2014 Issued
Empire Technology Development LLC	France	2545371	11753774.6	Feb 17, 2011 Issued
Empire Technology Development LLC	Germany	2545371	602011052566.2	Feb 17, 2011 Issued
Empire Technology Development LLC	United Kingdom	2545371	11753774.6	Feb 17, 2011 Issued
Empire Technology Development LLC	United States of America	8871512	13/384174	Jan 13, 2012 Issued
Empire Technology Development LLC	United States of America	9428532	14/497574	Sep 26, 2014 Issued
Empire Technology Development LLC	China	ZL201080069433.2	201080069433.2	Aug 6, 2010 Issued
Empire Technology Development LLC	United States of America	9388379	13/202565	Aug 19, 2011 Issued
Empire Technology Development LLC	United States of America	9534800	13/126448	Apr 27, 2011 Issued
Empire Technology Development LLC	European Patent Office		10856525.0	Aug 27, 2010 Published
Empire Technology Development LLC	United States of America	8366874	13/131111	May 25, 2011 Issued
Empire Technology Development LLC	United States of America	8807189	13/729508	Dec 28, 2012 Issued
Empire Technology Development LLC	China	ZL201080068441.5	201080068441.5	Aug 9, 2010 Issued
Empire Technology Development LLC	United States of America	8572831	12/995440	Nov 30, 2010 Issued
Empire Technology Development LLC	Japan	5629822	2013-514139	Jun 7, 2010 Issued
Empire Technology Development LLC	United States of America	9266201	14/043836	Oct 1, 2013 Issued
Empire Technology Development LLC	United States of America	1009824	12/993167	Nov 17, 2010 Issued
Empire Technology Development LLC	China	ZL201080069448.9	201080069448.9	Sep 1, 2010 Issued
Empire Technology Development LLC	Japan	5746349	2013-527049	Sep 1, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1717110	10-2013-7008345	Sep 1, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1605354	10-2015-7020389	Jul 27, 2015 Issued
Empire Technology Development LLC	European Patent Office	10856808.0	15/991,896	Sep 1, 2010 Published
Empire Technology Development LLC	United States of America			May 29, 2018 Published

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COBB_029458

Empire Technology Development LLC	United States of America	8680992	13/260120	Sep 23, 2011 Issued
Empire Technology Development LLC	United States of America	9454777	14/208175	Mar 13, 2014 Issued
Empire Technology Development LLC	United States of America	8769967	12/999182	Dec 15, 2010 Issued
Empire Technology Development LLC	United States of America	9200271	13/202816	Aug 23, 2011 Issued
Empire Technology Development LLC	United States of America	9717420	13/128627	May 10, 2011 Issued
Empire Technology Development LLC	United States of America	8660000	12/999269	Dec 15, 2010 Issued
Empire Technology Development LLC	United States of America	8422792	13/003717	Jan 11, 2011 Issued
Empire Technology Development LLC	United States of America	8734924	12/999978	Dec 17, 2010 Issued
Empire Technology Development LLC	United States of America	8447853	12/999784	Dec 17, 2010 Issued
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Empire Technology Development LLC	Republic of Korea	10-1394747	10-2012-7017475	Jun 4, 2010 Issued
Empire Technology Development LLC	Japan	5658768	2012-554977	Jun 4, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1486938	10-2013-7010955	Sep 29, 2010 Issued
Empire Technology Development LLC	China	ZL201080069358.X	201080069358.X	Sep 29, 2010 Issued
Empire Technology Development LLC	United States of America	8911988	13/202559	Aug 19, 2011 Issued
Empire Technology Development LLC	United States of America	8439982	13/125006	Apr 19, 2011 Issued
Empire Technology Development LLC	China	ZL201080068194.9	201080068194.9	Aug 27, 2010 Issued
Empire Technology Development LLC	Japan	5719024	2013-524829	Aug 27, 2010 Issued
Empire Technology Development LLC	United States of America	8475665	13/059131	Feb 15, 2011 Issued
Empire Technology Development LLC	China	ZL201080067917.3	201080067917.3	Jul 15, 2010 Issued
Empire Technology Development LLC	Japan	5697280	2013-519639	Jul 15, 2010 Issued
Empire Technology Development LLC	European Patent Office	8598266	13/322082	Jul 15, 2010 Published
Empire Technology Development LLC	United States of America	ZL201180064313.8	201180064313.8	Nov 22, 2011 Issued
Empire Technology Development LLC	China	8760177	12/999461	Mar 25, 2011 Issued
Empire Technology Development LLC	United States of America	9612169	14/303326	Dec 16, 2010 Issued
Empire Technology Development LLC	United States of America	9508913	12/999684	Jun 12, 2014 Issued
Empire Technology Development LLC	United States of America	ZL201080067513.4	201080067513.4	Dec 17, 2010 Issued
Empire Technology Development LLC	China	8993338	13/126085	Jun 18, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	5580481	2013-525878	Apr 26, 2011 Issued
Empire Technology Development LLC	China	9835605	14/657902	Aug 27, 2010 Issued
Empire Technology Development LLC	United States of America	10856524.3	10856524.3	Aug 27, 2010 Published
Empire Technology Development LLC	European Patent Office	8530241	13/063721	Mar 11, 2011 Issued
Empire Technology Development LLC	China	ZL201080068828.0	201080068828.0	Aug 27, 2010 Issued

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REEL: 048373 FRAME: 0368

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Empire Technology Development LLC	Japan	5709998	2013-525877	Aug 27, 2010 Issued
Empire Technology Development LLC	European Patent Office		10856523.5	Aug 27, 2010 Published
Empire Technology Development LLC	United States of America	8639934	12/999770	Dec 17, 2010 Issued
Empire Technology Development LLC	United States of America	8951682	12/999933	Dec 17, 2010 Issued
Empire Technology Development LLC	United States of America	8153575	13/202933	Aug 23, 2011 Issued
Empire Technology Development LLC	United States of America	9640846	12/999301	Dec 15, 2010 Issued
Empire Technology Development LLC	United States of America	8643625	13/142093	Jun 10, 2010 Issued
Empire Technology Development LLC	China	ZL201080062378.4	201080062378.4	Jun 10, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1365313	10-2012-7017476	Jun 10, 2010 Issued
Empire Technology Development LLC	Japan	5725672	2012-554978	Jun 10, 2010 Issued
Empire Technology Development LLC	United States of America	5281201	2012-533185	Dec 16, 2010 Issued
Empire Technology Development LLC	Japan	ZL201080069017.2	201080069017.2	Sep 7, 2010 Issued
Empire Technology Development LLC	China	8830957	12/999513	Sep 7, 2010 Issued
Empire Technology Development LLC	European Patent Office	2614673	10857066.4	Sep 7, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1578140	10-2013-7008888	Sep 7, 2010 Issued
Empire Technology Development LLC	United States of America	9220043	14/472975	Aug 29, 2014 Issued
Empire Technology Development LLC	Germany	2614673	60201004913.7	Sep 7, 2010 Issued
Empire Technology Development LLC	France	2614673	10857066.4	Sep 7, 2010 Issued
Empire Technology Development LLC	United Kingdom	2614673	10857066.4	Sep 7, 2010 Issued
Empire Technology Development LLC	European Patent Office		18155345.4	Sep 7, 2010 Issued
Empire Technology Development LLC	United States of America	8932533	12/999594	Sep 7, 2010 Marked for Impairing
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Empire Technology Development LLC	United States of America	8889403	13/394471	Mar 6, 2012 Issued
Empire Technology Development LLC	United States of America	9034640	13/322393	Nov 23, 2011 Issued
Empire Technology Development LLC	United States of America	8246698	13/126132	Apr 26, 2011 Issued
Empire Technology Development LLC	United States of America	8298298	13/546333	Jul 11, 2012 Issued
Empire Technology Development LLC	United States of America	8617750	12/999694	Dec 17, 2010 Issued
Empire Technology Development LLC	United States of America	8802303	14/055445	Oct 16, 2013 Issued
Empire Technology Development LLC	United States of America	9102914	13/257949	Sep 20, 2011 Issued
Empire Technology Development LLC	United States of America	8423867	13/059808	Feb 18, 2011 Issued
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Empire Technology Development LLC	Japan	5468184	2013-536575	Oct 29, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1326011	10-2013-7013756	Oct 29, 2010 Issued
Empire Technology Development LLC	European Patent Office		10859090.2	Oct 29, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America		9204362	13/816178 Feb 8, 2013 Issued

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REEL: 048373 FRAME: 0369

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Empire Technology Development LLC	United States of America	8790926	13/260021	Sep 23, 2011 Issued
Empire Technology Development LLC	United States of America	8589933	13/129099	May 12, 2011 Issued
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Empire Technology Development LLC	Republic of Korea	10-1467072	10-2012-7032497	Oct 19, 2010 Issued
Empire Technology Development LLC	United States of America	9342305	14/035177	Sep 24, 2013 Issued
Empire Technology Development LLC	United States of America	9634881	13/264223	Oct 13, 2011 Issued
Empire Technology Development LLC	United States of America	10-1577878	10-2013-7012826	Feb 3, 2011 Issued
Empire Technology Development LLC	United States of America	8254250	12/895666	Sep 30, 2010 Issued
Empire Technology Development LLC	China	ZL201180024226.X	201180024226.X	Jan 28, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-142728	10-2012-7030630	Jan 28, 2011 Issued
Empire Technology Development LLC	Japan	5512899	2013-525901	Jan 28, 2011 Issued
Empire Technology Development LLC	United States of America	8954103	13/059744	Feb 18, 2011 Issued
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Empire Technology Development LLC	Japan	5648130	2013-531555	Oct 1, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1458570	10-2013-7011170	Oct 1, 2010 Issued
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Empire Technology Development LLC	United States of America	8856301	12/999561	Dec 16, 2010 Issued
Empire Technology Development LLC	United States of America	8577330	13/124745	Apr 18, 2011 Issued
Empire Technology Development LLC	United States of America	8862273	13/056026	Jan 26, 2011 Issued
Empire Technology Development LLC	China	ZL201080066807.5	201080066807.5	Jul 29, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1527769	10-2012-7032840	Jul 29, 2010 Issued
Empire Technology Development LLC	United States of America	9115976	14/001938	Aug 28, 2013 Issued
Empire Technology Development LLC	United States of America	8868688	13/144629	Jul 14, 2011 Issued
Empire Technology Development LLC	Japan	5604517	2012-525581	Jul 20, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1482818	10-2011-7022367	Jul 20, 2010 Issued
Empire Technology Development LLC	Brazil	11	2013-001426-1	Jul 20, 2010 Pending
Empire Technology Development LLC	European Patent Office	10855092.2		Jul 20, 2010 Published
Empire Technology Development LLC	United States of America	8661537	13/054055	Jan 13, 2011 Issued
Empire Technology Development LLC	Japan	5254497	2012-525583	Jul 21, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1463678	10-2012-7032839	Jul 21, 2010 Issued
Empire Technology Development LLC	United States of America	8881275	14/084413	Nov 19, 2013 Issued
Empire Technology Development LLC	United States of America	8492753	13/129371	May 13, 2011 Issued
Empire Technology Development LLC	China	ZL201080069270.8	201080069270.8	Sep 28, 2010 Issued
Empire Technology Development LLC	Japan	5762545	2013-530126	Sep 28, 2010 Issued
Empire Technology Development LLC	United States of America	8512669	13/129557	May 16, 2011 Issued
Empire Technology Development LLC	United States of America	8840722	13/546961	Jul 19, 2013 Issued

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REEL: 048373 FRAME: 0370**

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Empire Technology Development LLC	United States of America	9695048 14/820184	Aug 6, 2015 Issued
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Empire Technology Development LLC	Japan	5795686 201180071640.6	Jun 13, 2011 Issued
Empire Technology Development LLC	United States of America	9738984 13/383802	Jan 12, 2012 Issued
Empire Technology Development LLC	United States of America	8691335 13/517458	Jun 20, 2012 Issued
Empire Technology Development LLC	United States of America	9359671 14/176833	Feb 10, 2014 Issued
Empire Technology Development LLC	United States of America	9517438 13/383955	Jan 13, 2012 Issued
Empire Technology Development LLC	United States of America	8679290 13/002080	Dec 30, 2010 Issued
Empire Technology Development LLC	China	ZL201080069797.0 201080069797.0	Oct 28, 2010 Issued
Empire Technology Development LLC	United States of America	9573312 14/176362	Feb 10, 2014 Issued
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Empire Technology Development LLC	Republic of Korea	10-1419155 10-2012-7017121	Jun 14, 2010 Issued
Empire Technology Development LLC	Japan	5513674 2013-502552	Jun 14, 2010 Issued
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Empire Technology Development LLC	Republic of Korea	10-1521160 10-2013-7014227	Nov 3, 2010 Issued
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Empire Technology Development LLC	United States of America	8965598 13/054882	Jan 19, 2011 Issued
Empire Technology Development LLC	United States of America	9352833 14/574329	Dec 17, 2014 Issued
Empire Technology Development LLC	United States of America	8709166 13/126115	Apr 26, 2011 Issued
Empire Technology Development LLC	United States of America	8512936 12/999141	Dec 15, 2010 Issued
Empire Technology Development LLC	China	ZL20108006931.0 20108006931.0	Sep 29, 2010 Issued
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Empire Technology Development LLC	United States of America	8943380 13/500881	Apr 6, 2012 Issued
Empire Technology Development LLC	United States of America	8580479 13/123816	Apr 12, 2011 Issued
Empire Technology Development LLC	United States of America	9599895 14/048682	Oct 8, 2013 Issued

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Empire Technology Development LLC	United States of America	8329846	13/531940	Jun 25, 2012 Issued
Empire Technology Development LLC	Japan	9336146	13/319159	Nov 7, 2011 Issued
Empire Technology Development LLC	Republic of Korea	5603507	2013-544447	Dec 29, 2010 Issued
Empire Technology Development LLC	United States of America	10-1497516	10-2013-7017646	Dec 29, 2010 Issued
Empire Technology Development LLC	United States of America	9760486	15/080605	Mar 25, 2016 Issued
Empire Technology Development LLC	China	9022688	13/129531	May 16, 2011 Issued
Empire Technology Development LLC	United States of America	ZL201080070221.6	201080070221.6	Dec 1, 2010 Issued
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Empire Technology Development LLC	United States of America	8635817	13/260157	Sep 23, 2011 Issued
Empire Technology Development LLC	United States of America	15/587,382		May 4, 2017 Published
Empire Technology Development LLC	United States of America	8809064	13/318398	Nov 1, 2011 Issued
Empire Technology Development LLC	United States of America	8832414	13/387210	Jan 26, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1531155	10-2013-7019466	Mar 24, 2011 Issued
Empire Technology Development LLC	United States of America	9308294	13/499392	Mar 30, 2012 Issued
Empire Technology Development LLC	China	14/583,533		Dec 26, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	8946352	13/128207	May 6, 2011 Issued
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Empire Technology Development LLC	United States of America	8683493	13/122189	Apr 1, 2011 Issued
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Empire Technology Development LLC	United States of America	8855030	13/121964	Mar 31, 2011 Issued
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Empire Technology Development LLC	United States of America	9936375	15/156635	May 17, 2016 Issued
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Empire Technology Development LLC	United States of America	8385389	13/057082	Dec 6, 2011 Issued
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Empire Technology Development LLC	Japan	5497968		Nov 3, 2010 Issued

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Empire Technology Development LLC	Germany	2636155	602010039618.5	Nov 3, 2010 Issued
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Empire Technology Development LLC	Austria	2636155	10859364.1	Nov 3, 2010 Issued
Empire Technology Development LLC	China		201610842777.1	Nov 3, 2010 Published
Empire Technology Development LLC	United States of America	8671347	13/499402	Mar 30, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1359410	10-2013-7018470	Jan 7, 2011 Issued
Empire Technology Development LLC	Japan	5507771	2013-547450	Jan 7, 2011 Issued
Empire Technology Development LLC	European Patent Office	ZL201180064377.8	201180064377.8	Jan 7, 2011 Issued
Empire Technology Development LLC	United States of America	2661917	11855022.7	Jan 7, 2011 Issued
Empire Technology Development LLC	Germany	2661917	602011030856.4	Oct 31, 2013 Issued
Empire Technology Development LLC	United Kingdom	2661917	EP11855022.7	Jan 7, 2011 Issued
Empire Technology Development LLC	France	2661917	EP11855022.7	Jan 7, 2011 Issued
Empire Technology Development LLC	United States of America	9736561	14/054851	Oct 16, 2013 Issued
Empire Technology Development LLC	United States of America	8887073	13/059826	Feb 18, 2011 Issued
Empire Technology Development LLC	China	ZL201080070058.3	201080070058.3	Dec 1, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1532846	10-2013-7006117	Dec 1, 2010 Issued
Empire Technology Development LLC	Germany		112010006047.9	Dec 1, 2010 Published
Empire Technology Development LLC	United States of America	8532340	13/061677	Mar 1, 2011 Issued
Empire Technology Development LLC	China	ZL201080066827.2	201080066827.2	Sep 30, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1396370	10-2012-7029384	Sep 30, 2010 Issued
Empire Technology Development LLC	Japan	5592014	2013-524831	Sep 30, 2010 Issued
Empire Technology Development LLC	United States of America	8989395	13/127798	May 5, 2011 Issued
Empire Technology Development LLC	China	ZL201080070076.1	201080070076.1	Dec 7, 2010 Issued
Empire Technology Development LLC	Japan	5750167	2013-541970	Dec 7, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1521478	10-2013-7017789	Dec 7, 2010 Issued
Empire Technology Development LLC	United States of America	9218820	14/632457	Feb 26, 2015 Issued
Empire Technology Development LLC	United States of America	8603216	13/388142	Jan 31, 2012 Issued
Empire Technology Development LLC	China	ZL201180068989.4	201180068989.4	Apr 18, 2011 Issued
Empire Technology Development LLC	United States of America	9611521	14/074329	Nov 7, 2013 Issued
Empire Technology Development LLC	United States of America	9289781	13/144869	Jul 15, 2011 Issued
Empire Technology Development LLC	China	ZL201180064972.1	201180064972.1	Mar 18, 2011 Issued
Empire Technology Development LLC	United States of America	8897244	13/580648	Aug 22, 2012 Issued
Empire Technology Development LLC	China	ZL201080070178.3	201080070178.3	Dec 28, 2010 Issued

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Empire Technology Development LLC	Japan	5666721	2013-546099	Dec 28, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1457604	10-2013-7018192	Dec 28, 2010 Issued
Empire Technology Development LLC	European Patent Office		10861444.7	Dec 28, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	ZL201180065157.7	9061915 13/147266	Aug 1, 2011 Issued
Empire Technology Development LLC	China		201180065157.7	Mar 9, 2011 Issued
Empire Technology Development LLC	United States of America	5930057	9 143267 13/500542	Apr 5, 2012 Issued
Empire Technology Development LLC	Japan	10-1643976	2014-538765	Oct 27, 2011 Issued
Empire Technology Development LLC	United States of America		10-2014-7011746	Oct 27, 2011 Issued
Empire Technology Development LLC	Republic of Korea	8 812681	13/262825	Oct 3, 2011 Issued
Empire Technology Development LLC	China	ZL201180071594.X	201180071594.X	Apr 13, 2011 Issued
Empire Technology Development LLC	Japan	6051203	2014-505112	Apr 13, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1525517	10-2013-7029650	Apr 13, 2011 Issued
Empire Technology Development LLC	European Patent Office		11863684.4	Apr 13, 2011 Published
Empire Technology Development LLC	United States of America	ZL201180070593.3	8974594 13/139583	Jun 14, 2011 Issued
Empire Technology Development LLC	China	2680791	201180070593.3	Mar 3, 2011 Issued
Empire Technology Development LLC	Germany	2680791	11860065.9	Mar 3, 2011 Issued
Empire Technology Development LLC	France	2680791	602011026279.3	Mar 3, 2011 Issued
Empire Technology Development LLC	United Kingdom	2680791	11860065.9	Mar 3, 2011 Issued
Empire Technology Development LLC	United States of America		8546617 13/554783	Jul 20, 2012 Issued
Empire Technology Development LLC	United States of America	9352485	13/974402	Aug 23, 2013 Issued
Empire Technology Development LLC	United States of America	8956377	13/514521	Jun 7, 2012 Issued
Empire Technology Development LLC	United States of America	8 541094	13/130818	May 24, 2011 Issued
Empire Technology Development LLC	United States of America	9422712	13/975282	Aug 23, 2013 Issued
Empire Technology Development LLC	United States of America	8 534022	13/139328	Jun 13, 2011 Issued
Empire Technology Development LLC	China	ZL201380076460.6	201380076460.6	Mar 15, 2013 Issued
Empire Technology Development LLC	United States of America	8 968649	13/382384	Jan 5, 2012 Issued
Empire Technology Development LLC	China	ZL201180070550.5	201180070550.5	May 16, 2011 Issued
Empire Technology Development LLC	China	ZL201180069687.9	201180069687.9	Apr 13, 2011 Issued
Empire Technology Development LLC	United States of America	9 868641	15/071067	Mar 15, 2016 Issued
Empire Technology Development LLC	United States of America	8 941751	13/264236	Oct 13, 2011 Issued
Empire Technology Development LLC	United States of America	9 058165	13/264702	Oct 14, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1552605	10-2013-7023676	May 5, 2011 Issued
Empire Technology Development LLC	United States of America	9 319456	13/816552	Feb 12, 2013 Issued
Empire Technology Development LLC	China	ZL201180068745.6	201180068745.6	Mar 29, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1561565	10-2013-7011523	Mar 29, 2011 Issued

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Empire Technology Development LLC	United States of America	9607578	13/144401	Jul 13, 2011 Issued
Empire Technology Development LLC	China	ZL201180053250.6	201180053250.6	Mar 8, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1564955	10-2013-7010702	Mar 8, 2011 Issued
Empire Technology Development LLC	United States of America	8799618	13/503628	Apr 23, 2012 Issued
Empire Technology Development LLC	United States of America	9672145	14/332878	Jul 16, 2014 Issued
Empire Technology Development LLC	United States of America	9898401	15/613349	Jun 5, 2017 Issued
Empire Technology Development LLC	United States of America	9491445	13/263417	Oct 7, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1569602	10-2013-7023672	May 5, 2011 Issued
Empire Technology Development LLC	Japan	5863134	2014-506377	May 5, 2011 Issued
Empire Technology Development LLC	United States of America	9094888	13/263835	Oct 10, 2011 Issued
Empire Technology Development LLC	China	ZL201180071915.6	201180071915.6	Apr 29, 2011 Issued
Empire Technology Development LLC	Japan	5806389	2014-508328	Apr 29, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1565478	10-2013-7031423	Apr 29, 2011 Issued
Empire Technology Development LLC	European Patent Office	2702805	11864569.6	Apr 29, 2011 Issued
Empire Technology Development LLC	United States of America	9980185	14/797703	Jul 13, 2015 Issued
Empire Technology Development LLC	Japan	6068588	2015-173468	Sep 3, 2015 Issued
Empire Technology Development LLC	Republic of Korea	10-1759665	10-2015-7031080	Oct 28, 2015 Issued
Empire Technology Development LLC	United Kingdom	2702805	11864569.6	Apr 29, 2011 Issued
Empire Technology Development LLC	Germany	2702805	602011043047.5	Apr 29, 2011 Issued
Empire Technology Development LLC	France	2702805	11864569.6	Apr 29, 2011 Issued
Empire Technology Development LLC	United States of America	15/979,209	201710316268.X	May 14, 2018 Pending
Empire Technology Development LLC	China			Apr 29, 2011 Published
Empire Technology Development LLC	Hong Kong			Jan 11, 2018 Published
Empire Technology Development LLC	European Patent Office			Apr 29, 2011 Published
Empire Technology Development LLC	United States of America	9212245	13/980535	Jul 18, 2013 Issued
Empire Technology Development LLC	United States of America	8507294	13/500052	Apr 3, 2012 Issued
Empire Technology Development LLC	China	ZL201180071457.6	201180071457.6	Jul 13, 2011 Issued
Empire Technology Development LLC	Japan	5564155	2014-515797	Jul 13, 2011 Issued
Empire Technology Development LLC	United States of America	9257089	13/380301	Dec 22, 2011 Issued
Empire Technology Development LLC	China	ZL201180054980.8	201180054980.8	Feb 25, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1482025	10-2013-7010077	Feb 25, 2011 Issued
Empire Technology Development LLC	United States of America	9818227	14/979130	Dec 22, 2015 Issued
Empire Technology Development LLC	China			Feb 25, 2011 Published
Empire Technology Development LLC	United States of America	8761290	13/133942	Jun 9, 2011 Issued
Empire Technology Development LLC	China	ZL201180066266.0	201180066266.0	Jan 28, 2011 Issued
Empire Technology Development LLC	Japan	5663670	2013-551950	Jan 28, 2011 Issued

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REEL: 048373 FRAME: 0375**

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Empire Technology Development LLC	Republic of Korea	10-1524391	10-2013-7019178	Jan 28, 2011 Issued
Empire Technology Development LLC	European Patent Office	9671140	11857239.5	Jan 28, 2011 Published
Empire Technology Development LLC	United States of America	ZL201180073616.6	201180073616.6	Sep 19, 2012 Issued
Empire Technology Development LLC	China	9157669	13/145948	Sep 21, 2011 Issued
Empire Technology Development LLC	United States of America	8739553	13/386736	Jul 22, 2011 Issued
Empire Technology Development LLC	China	9310109	14/259663	Jan 24, 2012 Issued
Empire Technology Development LLC	United States of America	9258680	13/515001	Sep 21, 2011 Issued
Empire Technology Development LLC	United States of America	9894481	14/973721	Apr 23, 2014 Issued
Empire Technology Development LLC	United States of America	10136258	15/877354	Jun 11, 2012 Issued
Empire Technology Development LLC	United States of America	8797715	13/142530	Dec 17, 2015 Issued
Empire Technology Development LLC	United States of America	9468595	14/440344	Jan 22, 2018 Issued
Empire Technology Development LLC	United States of America	9238774	13/940024	Jun 28, 2011 Issued
Empire Technology Development LLC	United States of America	8889472	13/260899	REEL: 048373 FRAME: 0376
Empire Technology Development LLC	United States of America	9117818	14/538202	May 1, 2015 Issued
Empire Technology Development LLC	United States of America	8785521	13/143726	Jul 11, 2013 Issued
Empire Technology Development LLC	United States of America	9304898	13/497442	Sep 28, 2011 Issued
Empire Technology Development LLC	United States of America	1007605	14/859322	Sep 20, 2015 Issued
Empire Technology Development LLC	United States of America	8691284	13/443576	Nov 11, 2014 Issued
Empire Technology Development LLC	United States of America	8867515	13/503624	Jul 7, 2011 Issued
Empire Technology Development LLC	United States of America	9469941	13/461475	Mar 21, 2012 Issued
Empire Technology Development LLC	China	ZL201180071069.8	201180071069.8	Sep 20, 2015 Issued
Empire Technology Development LLC	Japan	5844462	2014-518523	Apr 10, 2012 Issued
Empire Technology Development LLC	United States of America	8902853	13/266104	Apr 23, 2012 Issued
Empire Technology Development LLC	China	ZL201180071215.7	201180071215.7	May 1, 2012 Issued
Empire Technology Development LLC	European Patent Office	11866872.2		Oct 24, 2011 Issued
Empire Technology Development LLC	United States of America	9227099	13/517182	Jul 1, 2011 Issued
Empire Technology Development LLC	United States of America	8565203	13/140102	May 27, 2011 Issued
Empire Technology Development LLC	China	ZL201180069451.5	201180069451.5	May 27, 2011 Published
Empire Technology Development LLC	European Patent Office	2689604	11861531.9	Jun 19, 2012 Issued
Empire Technology Development LLC	Japan	5487366	2014-501049	Jun 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1365280	10-2013-7024567	Mar 22, 2011 Issued
Empire Technology Development LLC	United Kingdom	2689604	11861531.9	Mar 22, 2011 Issued
Empire Technology Development LLC	France	2689604	11861531.9	Mar 22, 2011 Issued
Empire Technology Development LLC	Germany	2689604	602011041809.2	Mar 22, 2011 Issued

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REEL: 048373 FRAME: 0376

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Empire Technology Development LLC	United States of America	9171674	13/260234	Sep 23, 2011 Issued
Empire Technology Development LLC	China	ZL201180071456.1	201180071456.1	Apr 6, 2011 Issued
Empire Technology Development LLC	United States of America	9793065	14/850826	Sep 10, 2015 Issued
Empire Technology Development LLC	United States of America	8761023	13/139240	Jun 10, 2011 Issued
Empire Technology Development LLC	China	ZL201180069125.4	201180069125.4	Mar 11, 2011 Issued
Empire Technology Development LLC	Japan	5663105	2013-557700	Mar 11, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1512922	10-2013-7025519	Mar 11, 2011 Issued
Empire Technology Development LLC	United States of America	9834726	14/655293	Jun 24, 2015 Issued
Empire Technology Development LLC	United States of America	9856381	14/913239	Feb 19, 2016 Issued
Empire Technology Development LLC	United States of America	8842416	13/202082	Aug 17, 2011 Issued
Empire Technology Development LLC	China	ZL201180070596.7	201180070596.7	May 17, 2011 Issued
Empire Technology Development LLC	United States of America	9230797	13/391038	Feb 17, 2012 Issued
Empire Technology Development LLC	China	ZL201180072344.8	201180072344.8	May 26, 2011 Issued
Empire Technology Development LLC	United States of America	8986399	13/319834	Nov 10, 2011 Issued
Empire Technology Development LLC	China	ZL201180070373.0	201180070373.0	May 25, 2011 Issued
Empire Technology Development LLC	United States of America	9338257	13/389432	Feb 7, 2012 Issued
Empire Technology Development LLC	Japan	6120781	2013-558000	Mar 18, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1494121	10-2013-7025258	Mar 18, 2011 Issued
Empire Technology Development LLC	United States of America	9826065	15/047739	Feb 19, 2016 Issued
Empire Technology Development LLC	United States of America	15/815,823		Nov 17, 2017 Published
Empire Technology Development LLC	United States of America	15/026,915		Apr 1, 2016 Marked for Impairing
Empire Technology Development LLC	China	201380079988.9		Oct 2, 2013 Marked for Impairing
Empire Technology Development LLC	United States of America	9245307	13/381329	Dec 28, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1547740	10-2013-7019643	Jun 1, 2011 Issued
Empire Technology Development LLC	United States of America	8465833	13/383516	Jan 11, 2012 Issued
Empire Technology Development LLC	China	ZL201180072299.6	201180072299.6	Aug 30, 2011 Issued
Empire Technology Development LLC	Japan	5952906	2014-523904	Aug 30, 2011 Issued
Empire Technology Development LLC	United States of America	9162002	13/375262	Nov 30, 2011 Issued
Empire Technology Development LLC	China	ZL201180072379.1	201180072379.1	Aug 19, 2011 Issued
Empire Technology Development LLC	Japan	5788599	2014-523902	Aug 19, 2011 Issued
Empire Technology Development LLC	United States of America	8771462	13/383358	Jan 10, 2012 Issued
Empire Technology Development LLC	China	ZL201180072437.0	201180072437.0	Aug 10, 2011 Issued
Empire Technology Development LLC	Japan	5952905	2014-522806	Aug 10, 2011 Issued
Empire Technology Development LLC	United States of America	8532672	13/390264	Feb 13, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1513829	10-2013-7031327	Aug 25, 2011 Issued
Empire Technology Development LLC	China	ZL201180072657.3	201180072657.3	Aug 25, 2011 Issued

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REEL: 048373 FRAME: 0377**

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Empire Technology Development LLC	United States of America	9263196	13/519569	Jun 27, 2012 Issued	
Empire Technology Development LLC	United States of America	9004172	13/512700	May 30, 2012 Issued	
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Empire Technology Development LLC	Canada	2011375724	2011375724	Sep 1, 2011 Issued	
Empire Technology Development LLC	United States of America	2,840,368	2,840,368	Sep 1, 2011 Issued	
Empire Technology Development LLC	United States of America	8780715	13/255905	Sep 10, 2011 Issued	
Empire Technology Development LLC	United States of America	8909157	13/142280	Jun 26, 2011 Issued	
Empire Technology Development LLC	United States of America	9098406	13/521908	Jul 12, 2012 Issued	
Empire Technology Development LLC	United States of America	8382889	13/389582	Feb 8, 2012 Issued	
Empire Technology Development LLC	United States of America	8629266	13/650722	Oct 12, 2012 Issued	
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Empire Technology Development LLC	Japan	5813238	9109994	13/642018	Nov 9, 2011 Issued
Empire Technology Development LLC	United States of America	8861752	13/390337	Oct 18, 2012 Issued	
Empire Technology Development LLC	Australia	2011374985	2011374985	Feb 14, 2012 Issued	
Empire Technology Development LLC	European Patent Office	2745536	11870957.5	Aug 16, 2011 Issued	
Empire Technology Development LLC	Japan	5859648	2014-525972	Aug 16, 2011 Issued	
Empire Technology Development LLC	Canada	2,845,204	2,845,204	Aug 16, 2011 Issued	
Empire Technology Development LLC	Republic of Korea	10-1568825	10-2014-7006943	Aug 16, 2011 Issued	
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Empire Technology Development LLC	Israel	230953	230953	Aug 16, 2011 Issued	
Empire Technology Development LLC	United States of America	9866948	14/483120	Sep 10, 2014 Issued	
Empire Technology Development LLC	United Kingdom	2745536	EP11870957.5	Aug 16, 2011 Issued	
Empire Technology Development LLC	Germany	2745536	602011023533.8	Aug 16, 2011 Issued	
Empire Technology Development LLC	France	EP11870957.5	EP11870957.5	Aug 16, 2011 Issued	
Empire Technology Development LLC	European Patent Office	15200544.3	15200544.3	Aug 16, 2011 Published	
Empire Technology Development LLC	United States of America	15/854,117	15/854,117	Dec 26, 2017 Published	
Empire Technology Development LLC	China	ZL201180072345.2	201180072345.2	Jan 25, 2012 Issued	
Empire Technology Development LLC	Japan	5699254	2014-528346	Sep 13, 2011 Issued	
Empire Technology Development LLC	United States of America	8747947	13/377971	Dec 13, 2011 Issued	
Empire Technology Development LLC	Republic of Korea	10-1405256	10-2012-7013781	Sep 16, 2011 Issued	
Empire Technology Development LLC	Taiwan R.O.C.	1455877	101102497	Jan 20, 2012 Issued	
Empire Technology Development LLC	Germany		112011100116.9	Sep 16, 2011 Published	

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Empire Technology Development LLC	United States of America	14/265,991	Apr 30, 2014 Published
Empire Technology Development LLC	United States of America	9011968 13/391158	Feb 17, 2012 Issued
Empire Technology Development LLC	Japan	5779721 2014-529668	Sep 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1629869 10-2014-7003623	Sep 16, 2011 Issued
Empire Technology Development LLC	United States of America	9938151 14/657886	Mar 13, 2015 Issued
Empire Technology Development LLC	China	201180073451.2	Sep 16, 2011 Marked for Impairing
Empire Technology Development LLC	China	ZL201180018749.3 201180018749.3	May 3, 2011 Issued
Empire Technology Development LLC	Japan	5784706 2013-508094	May 3, 2011 Issued
Empire Technology Development LLC	United States of America	8431098 13/377085	Dec 8, 2011 Issued
Empire Technology Development LLC	Japan	ZL201180071035.9 201180071035.9	Jul 14, 2011 Issued
Empire Technology Development LLC	United States of America	8845780 13/386095	Jan 20, 2012 Issued
Empire Technology Development LLC	China	ZL201180072362.6 201180072362.6	Aug 16, 2011 Issued
Empire Technology Development LLC	Japan	5820070 2014-523900	Aug 16, 2011 Issued
Empire Technology Development LLC	United States of America	9376732 14/480189	Sep 8, 2014 Issued
Empire Technology Development LLC	United States of America	9058687 13/319500	Nov 8, 2011 Issued
Empire Technology Development LLC	China	ZL201180071219.5 201180071219.5	Jun 8, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1569600 10-2013-7019405	Jun 8, 2011 Issued
Empire Technology Development LLC	Japan	5847924 2014-509275	Jun 8, 2011 Issued
Empire Technology Development LLC	United States of America	8916513 13/554633	Jul 20, 2012 Issued
Empire Technology Development LLC	United States of America	8951611 13/387546	Jan 27, 2012 Issued
Empire Technology Development LLC	China	ZL201180071336.1 201180071336.1	Jul 11, 2011 Issued
Empire Technology Development LLC	Japan	5824576 2014-511333	Jul 11, 2011 Issued
Empire Technology Development LLC	United States of America	8941363 13/264710	Oct 14, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1563066 10-2013-7019334	May 27, 2011 Issued
Empire Technology Development LLC	Japan	5847923 2014-506394	May 27, 2011 Issued
Empire Technology Development LLC	United States of America	9091634 13/496064	Mar 14, 2012 Issued
Empire Technology Development LLC	China	ZL201180072755.7 201180072755.7	Sep 16, 2011 Issued
Empire Technology Development LLC	Japan	5816756 2014-529667	Sep 16, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1619309 10-2014-7003622	Sep 16, 2011 Issued
Empire Technology Development LLC	United States of America	8520505 13/642485	Oct 19, 2012 Issued
Empire Technology Development LLC	China	ZL201280074713.1 201280074713.1	May 14, 2012 Issued
Empire Technology Development LLC	European Patent Office	2850744 12876978.3	Sep 16, 2011 Issued
Empire Technology Development LLC	Germany	2850744 602012033586.6	May 14, 2012 Issued
Empire Technology Development LLC	France	2850744 12876978.3	May 14, 2012 Issued
Empire Technology Development LLC	United Kingdom	2850744 12876978.3	May 14, 2012 Issued
Empire Technology Development LLC	United States of America	8813175 13/498424	Mar 27, 2012 Issued

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Empire Technology Development LLC	Japan	5718525	2014-522807	Aug 15, 2011 Issued
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Empire Technology Development LLC	China	ZL201180071787.5	201180071787.5	Jun 21, 2011 Issued
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Empire Technology Development LLC	Republic of Korea	10-1709171	10-2013-7033296	Jul 7, 2011 Issued
Empire Technology Development LLC	China	ZL201180072141.9	201180072141.9	Jul 7, 2011 Issued
Empire Technology Development LLC	Japan	5914646	2014-516959	Jul 7, 2011 Issued
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Empire Technology Development LLC	Japan	5798687	2014-527131	Aug 24, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1533672	10-2014-7005318	Aug 24, 2011 Issued
Empire Technology Development LLC	European Patent Office		11871126,6	Aug 24, 2011 Published
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Empire Technology Development LLC	China	201180074642.0	201180074642.0	Nov 15, 2011 Issued
Empire Technology Development LLC	Japan	5926810	2014-538774	Nov 15, 2011 Issued
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Empire Technology Development LLC	United States of America	9350012	13/390329	Feb 13, 2012 Issued
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Empire Technology Development LLC	Japan	5870194	2014-530644	Sep 23, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-16598402	10-2014-7009386	Sep 23, 2011 Issued
Empire Technology Development LLC	United States of America	1026030	13/578419	Feb 13, 2012 Issued
Empire Technology Development LLC	United States of America	8574384	13/702013	Aug 10, 2012 Issued
Empire Technology Development LLC	China	8834988	13/262089	Dec 4, 2012 Issued
Empire Technology Development LLC	China	ZL201180011134.8	201180011134.8	Sep 29, 2011 Issued
Empire Technology Development LLC	Japan	5504376	2013-505215	Apr 21, 2011 Issued

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COBB_029471

Empire Technology Development LLC	European Patent Office		11772691.9	Apr 21, 2011 Published
Empire Technology Development LLC	China	ZL201180072132.X	201180072132.X	Jul 6, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1680948	10-2014-7002292	Jul 6, 2011 Issued
Empire Technology Development LLC	European Patent Office	2729900	11869036.1	Jul 6, 2011 Issued
Empire Technology Development LLC	Japan	6033298	2014-518526	Jul 6, 2011 Issued
Empire Technology Development LLC	United States of America	10015559	15/018959	Feb 9, 2016 Issued
Empire Technology Development LLC	Germany	2729900	602011042415.7	Jul 6, 2011 Issued
Empire Technology Development LLC	United Kingdom	2729900	11869036.1	Jul 6, 2011 Issued
Empire Technology Development LLC	France	2729900	11869036.1	Jul 6, 2011 Issued
Empire Technology Development LLC	United States of America	9105207	13/636527	Sep 21, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1711358	10-2016-7030837	Nov 3, 2016 Issued
Empire Technology Development LLC	United States of America	9690457	13/821560	Mar 7, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1844395	10-2015-7007310	Aug 24, 2012 Issued
Empire Technology Development LLC	Japan	6289468	2015-528447	Aug 24, 2012 Issued
Empire Technology Development LLC	Japan	6356869	2017-099837	Aug 24, 2012 Issued
Empire Technology Development LLC	United States of America		15/633,636	Jun 26, 2017 Published
Empire Technology Development LLC	Republic of Korea		10-2018-7008632	Aug 24, 2012 Published
Empire Technology Development LLC	United States of America	9607436	13/879594	Apr 15, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1780034	10-2015-7007902	Aug 27, 2012 Issued
Empire Technology Development LLC	Japan	5980432	2015-529763	Aug 27, 2012 Issued
Empire Technology Development LLC	European Patent Office		12883675.6	Aug 27, 2012 Published
Empire Technology Development LLC	United States of America		15/469,933	Mar 27, 2017 Published
Empire Technology Development LLC	United States of America	8948690	13/395880	Mar 13, 2012 Issued
Empire Technology Development LLC	China	ZL201180073555.3	201180073555.3	Sep 21, 2011 Issued
Empire Technology Development LLC	Japan	5851042	2014-531769	Sep 21, 2011 Issued
Empire Technology Development LLC	United States of America	9294159	14/572733	Sep 21, 2011 Published
Empire Technology Development LLC	European Patent Office		11872638.9	Jan 3, 2013 Issued
Empire Technology Development LLC	United States of America	8655040	13/808159	Jul 19, 2013 Issued
Empire Technology Development LLC	United States of America	9174871	13/946710	Feb 12, 2013 Issued
Empire Technology Development LLC	United States of America	9683106	13/816702	Feb 6, 2013 Issued
Empire Technology Development LLC	United States of America	8947855	13/814504	Jun 28, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1713789	10-2015-7002407	Sep 21, 2012 Issued
Empire Technology Development LLC	United States of America	8924754	13/636523	Feb 2, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1621776	10-2014-7024579	Feb 8, 2013 Issued
Empire Technology Development LLC	United States of America	9454552	13/816075	Mar 14, 2013 Issued
Empire Technology Development LLC	United States of America	8907045	13/823291	

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COBB_029472

Empire Technology Development LLC	United States of America	8855553	13/574246	Jul 19, 2012 Issued
Empire Technology Development LLC	China	ZL201280000732.X	201280000732.X	Mar 2, 2012 Issued
Empire Technology Development LLC	United States of America	8665434	13/640360	Oct 10, 2012 Issued
Empire Technology Development LLC	China	ZL201280074481.X	201280074481.X	Jun 4, 2012 Issued
Empire Technology Development LLC	United States of America	8987606	13/511117	May 21, 2012 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1442489	101118552	May 24, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1370119	10-2012-7016188	Dec 13, 2011 Issued
Empire Technology Development LLC	Japan	5749353	2013-549418	Dec 13, 2011 Issued
Empire Technology Development LLC	United States of America	8722354	13/824105	Mar 15, 2013 Issued
Empire Technology Development LLC	United States of America	9068985	14/226398	Feb 6, 2014 Issued
Empire Technology Development LLC	United States of America	9068120	13/822221	Mar 11, 2013 Issued
Empire Technology Development LLC	Germany		112012006785.1	Sep 9, 2012 Marked for Impairing
Empire Technology Development LLC	United States of America	9133045	13/978239	Jul 3, 2013 Issued
Empire Technology Development LLC	United States of America	9189271	13/497529	Mar 21, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1650424	10-2014-7004024	Sep 13, 2011 Issued
Empire Technology Development LLC	China	ZL201180073331.2	201180073331.2	Sep 13, 2011 Issued
Empire Technology Development LLC	United States of America	8524919	13/445567	Apr 12, 2012 Issued
Empire Technology Development LLC	United States of America	8524920	13/614279	Sep 13, 2012 Issued
Empire Technology Development LLC	United States of America	9345997	13/956941	Aug 1, 2013 Issued
Empire Technology Development LLC	China	ZL201180074003.4	201180074003.4	Oct 18, 2011 Issued
Empire Technology Development LLC	Japan	5806409	2014-534528	Oct 18, 2011 Issued
Empire Technology Development LLC	United States of America	8979978	13/577859	Aug 8, 2012 Issued
Empire Technology Development LLC	China	ZL201280071545.0	201280071545.0	Jan 26, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1638060	10-2014-7023685	Jan 26, 2012 Issued
Empire Technology Development LLC	United States of America	8918794	13/389796	Feb 9, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1629861	10-2014-7000862	Aug 25, 2011 Issued
Empire Technology Development LLC	China	ZL201180073047.5	201180073047.5	Aug 25, 2011 Issued
Empire Technology Development LLC	United States of America	891961	13/823305	Mar 14, 2013 Issued
Empire Technology Development LLC	United States of America	8937140	13/520876	Jul 6, 2012 Issued
Empire Technology Development LLC	United States of America	9279071	14/1566138	Dec 10, 2014 Issued
Empire Technology Development LLC	United States of America	9056282	13/640272	Oct 9, 2012 Issued
Empire Technology Development LLC	China	ZL201280068318.2	201280068318.2	Jan 27, 2012 Issued
Empire Technology Development LLC	United States of America	9545600	14/703730	May 4, 2015 Issued
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Empire Technology Development LLC	China	ZL201280073689.X	201280073689.X	Jun 4, 2012 Issued
Empire Technology Development LLC	United States of America	9270491	13/511651	May 23, 2012 Issued

**PATENT
REEL: 048373 FRAME: 0382**

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Empire Technology Development LLC	Republic of Korea	10-1616211	10-2014-7003914	Nov 14, 2011 Issued
Empire Technology Development LLC	China	ZL201180074482.X	201180074482.X	Nov 14, 2011 Issued
Empire Technology Development LLC	United States of America	9213844	13/389380	Feb 7, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1603289	10-2014-7000008	Aug 25, 2011 Issued
Empire Technology Development LLC	China	ZL201180072987.2	201180072987.2	Aug 25, 2011 Issued
Empire Technology Development LLC	United States of America	14/873,172		Oct 1, 2015 Published
Empire Technology Development LLC	United States of America	9373145	13/502088	Apr 13, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1638262	10-2014-7003121	Oct 17, 2011 Issued
Empire Technology Development LLC	China	ZL201180073665.X	201180073665.X	Oct 17, 2011 Issued
Empire Technology Development LLC	Japan	5925324	2014-534527	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	15/145,920		May 4, 2016 Published
Empire Technology Development LLC	United States of America	8910173	13/580512	Aug 22, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1650749	10-2014-7008601	Nov 18, 2011 Issued
Empire Technology Development LLC	China	ZL201180073748.9	201180073748.9	Nov 18, 2011 Issued
Empire Technology Development LLC	United States of America	9460127	14/559563	Dec 3, 2014 Issued
Empire Technology Development LLC	United States of America	8959228	13/515052	Jun 11, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1554113	10-2014-7012948	Dec 23, 2011 Issued
Empire Technology Development LLC	China	ZL201180074333.3	201180074333.3	Dec 23, 2011 Issued
Empire Technology Development LLC	United States of America	9736043	14/593326	Jan 9, 2015 Issued
Empire Technology Development LLC	United States of America	8938634	13/514337	Jun 7, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1679487	10-2014-7017021	Jan 25, 2012 Issued
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Empire Technology Development LLC	United States of America	8947456	13/515404	Jan 25, 2012 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I521000	102111098	Jan 25, 2012 Issued
Empire Technology Development LLC	China	6042454	2014-554699	Jan 25, 2012 Issued
Empire Technology Development LLC	United States of America	8937148	13/811758	Apr 24, 2012 Issued
Empire Technology Development LLC	United States of America	9181287	14/567875	Apr 24, 2012 Issued
Empire Technology Development LLC	China	ZL201280076919.8	201280076919.8	Jun 12, 2012 Issued
Empire Technology Development LLC	United States of America	9150734	13/522429	Jun 12, 2012 Issued
Empire Technology Development LLC	United States of America	9500392	13/813588	Mar 28, 2013 Issued
Empire Technology Development LLC	United States of America	9095772	13/519393	Aug 12, 2009 Issued
Empire Technology Development LLC	Republic of Korea	10-1640904	10-2014-7020794	May 11, 2012 Issued
Empire Technology Development LLC	Japan	6333180	2014-556520	Jan 23, 2013 Issued

Empire Technology Development LLC	United States of America	9480914 14736365	Jun 11, 2015 Issued
Empire Technology Development LLC	Japan	2017-073700	Feb 7, 2012 Published
Empire Technology Development LLC	United States of America	8858324 13/519730	Jun 28, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1593344	Nov 10, 2011 Issued
Empire Technology Development LLC	United States of America	9498715 14/476648	Sep 3, 2014 Issued
Empire Technology Development LLC	United States of America	8890354 13/814996	Feb 8, 2013 Issued
Empire Technology Development LLC	United States of America	9662587 13/498909	Mar 28, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1581525	Sep 22, 2011 Issued
Empire Technology Development LLC	United States of America	15/604,604	May 24, 2017 Published
Empire Technology Development LLC	United States of America	9619240 13/811280	Jan 21, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1497410	Feb 1, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1655137	Feb 4, 2012 Issued
Empire Technology Development LLC	China	ZL201280071995.X	Feb 4, 2012 Issued
Empire Technology Development LLC	United States of America	9064185 13/642502	Oct 19, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1633198	Dec 28, 2011 Issued
Empire Technology Development LLC	United States of America	9214977 13/50907	Apr 7, 2012 Issued
Empire Technology Development LLC	United States of America	14/649,498	Jun 3, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9268587 13/579018	Aug 14, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1623297	Apr 13, 2012 Issued
Empire Technology Development LLC	United States of America	8747709 13/577382	Aug 6, 2012 Issued
Empire Technology Development LLC	United States of America	8852468 14/260835	Apr 24, 2014 Issued
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Empire Technology Development LLC	United States of America	8668372 13/640797	Oct 12, 2012 Issued
Empire Technology Development LLC	United States of America	9904002 14/400517	Nov 17, 2014 Issued
Empire Technology Development LLC	United States of America	9304946 13/813591	Jan 31, 2013 Issued
Empire Technology Development LLC	United States of America	8730833 13/642904	Oct 23, 2012 Issued
Empire Technology Development LLC	China	201280074466.5	May 9, 2012 Issued
Empire Technology Development LLC	European Patent Office	2848024	May 9, 2012 Issued
Empire Technology Development LLC	United Kingdom	2848024	May 9, 2012 Issued
Empire Technology Development LLC	France	2848024	May 9, 2012 Issued
Empire Technology Development LLC	Germany	2848024	May 9, 2012 Issued
Empire Technology Development LLC	United States of America	9047194 13/818485	May 9, 2012 Issued
Empire Technology Development LLC	United States of America	9196094 13/989858	Feb 25, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	9851574 14/232797	May 28, 2013 Issued
Empire Technology Development LLC	United States of America	I491328	Jan 14, 2014 Issued
Empire Technology Development LLC	United States of America	9047700 14/239471	Jan 31, 2013 Issued
Empire Technology Development LLC	United States of America		Feb 18, 2014 Issued

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COBB_029475

Empire Technology Development LLC	Republic of Korea	10-1648276	10-2014-7009167	Nov 9, 2011 Issued
Empire Technology Development LLC	Japan	5948429	2014-539916	Nov 9, 2011 Issued
Empire Technology Development LLC	United States of America	9280853	14/716194	May 19, 2015 Issued
Empire Technology Development LLC	United States of America	9077149	13/977482	Jun 28, 2013 Issued
Empire Technology Development LLC	United States of America	8635675	13/521440	Jul 10, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1614859	10-2014-7017193	Dec 2, 2011 Issued
Empire Technology Development LLC	China	ZL201180075157.5	201180075157.5	Dec 2, 2011 Issued
Empire Technology Development LLC	Japan	5646125	2014-542293	Dec 2, 2011 Issued
Empire Technology Development LLC	United States of America	9836514	13/502312	Apr 16, 2012 Issued
Empire Technology Development LLC	China	ZL201180074338.6	201180074338.6	Nov 7, 2011 Issued
Empire Technology Development LLC	Japan	6093773	2014-538772	Nov 7, 2011 Issued
Empire Technology Development LLC	United States of America	9135863	13/811220	Jan 18, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1497480	102113947	Apr 19, 2013 Issued
Empire Technology Development LLC	China	ZL201280072549.0	201280072549.0	Apr 23, 2012 Issued
Empire Technology Development LLC	United States of America	9047137	13/642403	Oct 19, 2012 Issued
Empire Technology Development LLC	United States of America	9207980	14/710307	May 12, 2015 Issued
Empire Technology Development LLC	United States of America	9103986	13/637206	Sep 25, 2012 Issued
Empire Technology Development LLC	United States of America	9318192	13/810324	Jan 15, 2013 Issued
Empire Technology Development LLC	United States of America	9231987	13/579131	Aug 15, 2012 Issued
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Empire Technology Development LLC	United States of America	9821493	15/174405	Jun 6, 2016 Issued
Empire Technology Development LLC	United States of America	9221040	13/579485	Aug 16, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1583748	10-2014-7017667	Dec 8, 2011 Issued
Empire Technology Development LLC	Japan	5851047	2014-545867	Dec 8, 2011 Issued
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Empire Technology Development LLC	United States of America	8888590	13/521435	Jul 10, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1595076	10-2014-7018127	Dec 13, 2011 Issued
Empire Technology Development LLC	Japan	5896389	2014-547151	Dec 13, 2011 Issued
Empire Technology Development LLC	United States of America	8530861	13/577486	Aug 7, 2012 Issued
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Empire Technology Development LLC	Republic of Korea	10-1601116	10-2014-7021263	Dec 29, 2011 Issued
Empire Technology Development LLC	United States of America	9772950	14/437331	Apr 21, 2015 Issued

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REEL: 048373 FRAME: 0385**

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Empire Technology Development LLC	United States of America	9120938	13/950851	Jul 25, 2013 Issued
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Empire Technology Development LLC	Republic of Korea	10-1603290	10-2014-7019284	Dec 14, 2011 Issued
Empire Technology Development LLC	China	ZL201180075103.9	201180075103.9	Dec 14, 2011 Issued
Empire Technology Development LLC	Japan	5937695	2014-547153	Feb 7, 2013 Issued
Empire Technology Development LLC	United States of America	9095141	13/761576	Jan 25, 2013 Issued
Empire Technology Development LLC	United States of America	9095142	13/812402	Jan 10, 2013 Issued
Empire Technology Development LLC	United States of America	8541556	13/738424	Oct 22, 2014 Issued
Empire Technology Development LLC	United States of America	9842040	14/396058	Dec 8, 2017 Published
Empire Technology Development LLC	United States of America	15/836,167		REEL: 048373 FRAME: 0386
Empire Technology Development LLC	United States of America	9053057	13/877422	Apr 2, 2013 Issued
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Empire Technology Development LLC	Japan	5937702	2014-555538	Feb 1, 2012 Issued
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Empire Technology Development LLC	United States of America	15/651,904		Jul 17, 2017 Published

Empire Technology Development LLC	Japan	2017-113075	Aug 27, 2012 Published
Empire Technology Development LLC	United States of America	13/884,116	May 8, 2013 Marked for Impairing
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Empire Technology Development LLC	United States of America	8779070 13/761512	Apr 4, 2012 Issued
Empire Technology Development LLC	United States of America	8952102 14/297990	Feb 7, 2013 Issued
Empire Technology Development LLC	United States of America	15/462,994	Jun 6, 2014 Issued
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Empire Technology Development LLC	United States of America	8990788 13/521578	Aug 1, 2012 Issued
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Empire Technology Development LLC	United States of America	13/879,544	Jan 19, 2012 Issued
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Empire Technology Development LLC	United States of America	14/857,316	Jan 19, 2012 Issued
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Empire Technology Development LLC	United States of America	15/063,614	Jan 8, 2013 Issued
Empire Technology Development LLC	United States of America	13/884,256	Sep 17, 2015 Marked for Impairing
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Empire Technology Development LLC	United States of America	9291607 13/879751	Aug 22, 2012 Issued
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Empire Technology Development LLC	China	201380036229.4	May 8, 2013 Issued

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REEL: 048373 FRAME: 0387

COBB_029478

Empire Technology Development LLC	European Patent Office	2846709	13787961.5	May 8, 2013 Issued
Empire Technology Development LLC	United States of America	2846709	9545256 14/729368	Jun 3, 2015 Issued
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Empire Technology Development LLC	United Kingdom	2846709	13787961.5	May 8, 2013 Issued
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Empire Technology Development LLC	United States of America	9840595	14/411025	Dec 23, 2014 Issued
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Empire Technology Development LLC	United States of Korea	10-1638064	10-2015-7024430	Mar 7, 2013 Published
Empire Technology Development LLC	United States of America	9126922	13/430090	Jul 30, 2013 Issued
Empire Technology Development LLC	United States of America	9656214	13/982344	Feb 11, 2013 Issued
Empire Technology Development LLC	United States of America	9544028	14/764696	Feb 11, 2013 Issued
Empire Technology Development LLC	China	ZL201380071928.2	201380071928.2	Mar 26, 2012 Issued
Empire Technology Development LLC	Germany	112013006535.5		Jul 29, 2013 Issued
Empire Technology Development LLC	United States of America	8864892	13/811733	Jul 30, 2013 Published
Empire Technology Development LLC	United States of America	9422406	14/491717	Jan 23, 2013 Issued
Empire Technology Development LLC	United States of America	8859735	13/885306	Sep 19, 2014 Issued
Empire Technology Development LLC	United States of America	8933660	13/810279	May 14, 2013 Issued
Empire Technology Development LLC	United States of America	8698096	13/879723	Jan 15, 2013 Issued
Empire Technology Development LLC	China	ZL201280076469.2	201280076469.2	Apr 16, 2013 Issued
Empire Technology Development LLC	United States of America	9275696	13/812967	Aug 16, 2012 Issued
Empire Technology Development LLC	United States of America	907771	13/640046	Jan 29, 2013 Issued
Empire Technology Development LLC	United States of America	9486707	14/724713	Oct 9, 2012 Issued
				May 28, 2015 Issued

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REEL: 048373 FRAME: 0388**

COBB_029479

Empire Technology Development LLC	United States of America	8790184 13/634502	Sep 12, 2012 Issued
Empire Technology Development LLC	United States of America	9588900 13/989798	May 26, 2013 Issued
Empire Technology Development LLC	United States of America	10049045 15/450020	Mar 5, 2017 Issued
Empire Technology Development LLC	United States of America	9147205 13/811643	Jan 22, 2013 Issued
Empire Technology Development LLC	United States of America	9057007 13/819889	Feb 28, 2013 Issued
Empire Technology Development LLC	China	ZL 201280077365.3	Nov 30, 2012 Published
Empire Technology Development LLC	China	ZL 201280077365.3	Apr 27, 2012 Issued
Empire Technology Development LLC	United States of America	201280077365.3	Sep 11, 2012 Published
Empire Technology Development LLC	United States of America	201280077365.3	Apr 16, 2013 Issued
Empire Technology Development LLC	China	ZL 201380070124.0	Jan 11, 2013 Issued
Empire Technology Development LLC	United States of America	201380070124.0	Jan 11, 2013 Issued
Empire Technology Development LLC	United States of America	9448921 13/879708	Jun 25, 2013 Issued
Empire Technology Development LLC	China	ZL 201380070124.0	Nov 14, 2014 Issued
Empire Technology Development LLC	China	10-1741346	Feb 27, 2013 Issued
Empire Technology Development LLC	United States of America	10-1741346	Feb 27, 2013 Issued
Empire Technology Development LLC	United States of America	8891296 13/997890	Mar 14, 2013 Issued
Empire Technology Development LLC	United States of America	9424945 14/541588	Sep 5, 2012 Issued
Empire Technology Development LLC	United States of America	ZL201380073919.7	Apr 27, 2012 Issued
Empire Technology Development LLC	United States of America	10-1742462	Apr 27, 2012 Issued
Empire Technology Development LLC	United States of America	10-1742462	Apr 27, 2012 Issued
Empire Technology Development LLC	United States of America	9166930 13/823361	May 29, 2015 Issued
Empire Technology Development LLC	United States of America	9075648 13/582912	Oct 1, 2013 Issued
Empire Technology Development LLC	United States of America	10-1650646	Oct 1, 2013 Issued
Empire Technology Development LLC	United States of America	9426048 14/725874	May 8, 2013 Issued
Empire Technology Development LLC	China	9278175 14/09279	May 8, 2013 Issued
Empire Technology Development LLC	China	ZL2013800366515.0	May 8, 2013 Issued
Empire Technology Development LLC	European Patent Office	2013800366515.0	May 8, 2013 Issued
Empire Technology Development LLC	Germany	2846703	May 8, 2013 Issued
Empire Technology Development LLC	United Kingdom	2846703	May 8, 2013 Issued
Empire Technology Development LLC	United States of America	13786982.2	May 8, 2013 Issued
Empire Technology Development LLC	United States of America	602013066629.8	May 8, 2013 Issued
Empire Technology Development LLC	United States of America	9391927 13/995411	May 8, 2013 Issued
Empire Technology Development LLC	United States of America	12880527.2	May 8, 2013 Issued
Empire Technology Development LLC	United States of America	9238712 13/87155	Jun 18, 2013 Issued
Empire Technology Development LLC	United States of America	8946364 13/817008	Jun 18, 2013 Issued
Empire Technology Development LLC	United States of America	9204807 14/006801	Jun 18, 2013 Issued
Empire Technology Development LLC	United States of America	9473426 14/005520	Jul 3, 2012 Published
Empire Technology Development LLC	Taiwan R.O.C.	I565265	Mar 14, 2013 Issued
Empire Technology Development LLC	China	ZL 201380074889.1	Feb 14, 2013 Issued
Empire Technology Development LLC	United States of America	1521317	Sep 23, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	103108408	Sep 16, 2013 Issued
Empire Technology Development LLC	United States of America	14/123,231	Mar 11, 2014 Issued
Empire Technology Development LLC	Taiwan R.O.C.	103104420	Mar 20, 2013 Issued
Empire Technology Development LLC	United States of America	9990212 14/360657	Dec 2, 2013 Marked for Impairing
Empire Technology Development LLC	China	ZL 2013800733190	Feb 11, 2014 Issued
Empire Technology Development LLC	China	2013800733190	Feb 19, 2013 Issued

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REEL: 048373 FRAME: 0389

COBB_029480

Empire Technology Development LLC	United States of America	8849757 13/640469	Oct 10, 2012 Issued
Empire Technology Development LLC	United States of America	9336217 14/470733	Aug 27, 2014 Issued
Empire Technology Development LLC	China	9183019 13/635395	Sep 14, 2012 Issued
Empire Technology Development LLC	United States of America	ZL201280072737.3 201280072737.3	Apr 25, 2012 Issued
Empire Technology Development LLC	United States of America	9759700 14/005232	Sep 13, 2013 Issued
Empire Technology Development LLC	United States of America	8880704 13/578025	Aug 9, 2012 Issued
Empire Technology Development LLC	China	10-1629596 10-2014-7028141	Apr 19, 2012 Issued
Empire Technology Development LLC	United States of America	ZL201280072529.3 201280072529.3	Apr 19, 2012 Issued
Empire Technology Development LLC	United States of America	9311316 14/488453	Sep 17, 2014 Issued
Empire Technology Development LLC	Australia	2013200526 2013200526	Feb 1, 2013 Issued
Empire Technology Development LLC	United States of America	9239137 13/876473	Mar 27, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I546497 102130068	Aug 22, 2013 Issued
Empire Technology Development LLC	United States of America	8668353 13/940017	Jul 11, 2013 Issued
Empire Technology Development LLC	United States of America	9197653 13/811384	Jan 21, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1587959 10-2014-7036969	Jun 5, 2012 Issued
Empire Technology Development LLC	United States of America	9882920 14/873169	Oct 1, 2015 Issued
Empire Technology Development LLC	United States of America	14/770,756	Aug 26, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9482639 14/768532	Aug 18, 2015 Issued
Empire Technology Development LLC	United States of America	9945793 15/289714	Oct 10, 2016 Issued
Empire Technology Development LLC	United States of America	9619265 14/233848	Jan 20, 2014 Issued
Empire Technology Development LLC	China	201380077736.2	Jun 25, 2013 Published
Empire Technology Development LLC	United States of America	8803187 13/830068	Mar 14, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1557948 102131340	Aug 30, 2013 Issued
Empire Technology Development LLC	United States of America	8961682 13/813715	Feb 1, 2013 Issued
Empire Technology Development LLC	United States of America	9193874 13/700683	Nov 28, 2012 Issued
Empire Technology Development LLC	United States of America	9701863 14/919296	Oct 21, 2015 Issued
Empire Technology Development LLC	India	1011/DELNP/2015	Aug 10, 2012 Published
Empire Technology Development LLC	Taiwan R.O.C.	I577749 102142058	Nov 19, 2013 Issued
Empire Technology Development LLC	United States of America	9846345 14/771400	Aug 28, 2015 Issued
Empire Technology Development LLC	United States of America	9255907 14/363049	Jun 5, 2014 Issued
Empire Technology Development LLC	United States of America	8859637 13/877413	Apr 2, 2013 Issued
Empire Technology Development LLC	China	201480073704.X	Jan 21, 2014 Published
Empire Technology Development LLC	United States of America	8997179 13/816717	Feb 12, 2013 Issued
Empire Technology Development LLC	China	20128007605X 20128007605.X	Sep 26, 2012 Issued
Empire Technology Development LLC	United States of America	10145815 15/027170	Apr 4, 2016 Issued
Empire Technology Development LLC	China	201380080104.1	Oct 7, 2013 Published

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REEL: 048373 FRAME: 0390**

COBB_029481

Empire Technology Development LLC	United States of America	9314885 13/578518	Aug 10, 2012 Issued
Empire Technology Development LLC	United States of America	9856408 14/763739	Jul 27, 2015 Issued
Empire Technology Development LLC	China	8868800 13/978655	Jul 8, 2013 Issued
Empire Technology Development LLC	United States of America	ZL201380074571.3 201380074571.3	Mar 12, 2013 Issued
Empire Technology Development LLC	China	9120958 13/816988	Feb 14, 2013 Issued
Empire Technology Development LLC	China	2012800734095 201280073409.5	May 22, 2012 Issued
Empire Technology Development LLC	United States of America	9143491 13/877377	Apr 2, 2013 Issued
Empire Technology Development LLC	United States of America	14/827,476	Aug 17, 2015 Published
Empire Technology Development LLC	China	ZL201380070781.5 201380070781.5	Jan 17, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1802625 10-2015-7021709	Jan 17, 2013 Issued
Empire Technology Development LLC	United States of America	9396069 13/879,713	Aug 27, 2013 Issued
Empire Technology Development LLC	United States of America	9195492 13/877216	Apr 1, 2013 Issued
Empire Technology Development LLC	China	ZL 2012800766611 201280076661.1	Oct 25, 2012 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1518534 102148775	Dec 27, 2013 Issued
Empire Technology Development LLC	United States of America	9520292 14/407072	Dec 11, 2014 Issued
Empire Technology Development LLC	China	ZL201380069631.2 201380069631.2	Jan 6, 2013 Issued
Empire Technology Development LLC	United States of America	9768767 15/336808	Oct 28, 2016 Issued
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Empire Technology Development LLC	Taiwan R.O.C.	I536260 103127054	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	10095658 14/411917	Dec 30, 2014 Issued
Empire Technology Development LLC	United States of America	9116939 13/816134	Feb 8, 2013 Issued
Empire Technology Development LLC	United States of America	9390122 14/796259	Jul 10, 2015 Issued
Empire Technology Development LLC	United States of America	9023146 13/819745	Feb 28, 2013 Issued
Empire Technology Development LLC	United States of America	9229865 13/982620	Jul 30, 2013 Issued
Empire Technology Development LLC	United States of America	9266020 13/876160	Mar 26, 2013 Issued
Empire Technology Development LLC	United States of America	9610496 14/992042	Jan 11, 2016 Issued
Empire Technology Development LLC	United States of America	9925461 15/477229	Apr 3, 2017 Issued
Empire Technology Development LLC	United States of America	9278318 13/995339	Jun 18, 2013 Issued
Empire Technology Development LLC	United States of America	9710303 14/009750	Oct 3, 2013 Issued
Empire Technology Development LLC	United States of America	14/418,871	Jan 30, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9254147 14/112037	Oct 16, 2013 Issued
Empire Technology Development LLC	United States of America	9241780 14/112036	Oct 16, 2013 Issued
Empire Technology Development LLC	United States of America	14/769,778	Aug 21, 2015 Marked for Impairing
Empire Technology Development LLC	Taiwan R.O.C.	I 624430 10014475 14/785323	Apr 14, 2014 Issued
Empire Technology Development LLC	United States of America		Oct 17, 2015 Issued

Empire Technology Development LLC	United States of America	9742617	13/701445	Nov 30, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1859115	10-2015-7001388	Jun 18, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1624319	10-2015-7003705	Jul 11, 2012 Issued
Empire Technology Development LLC	United States of America		13/980,033	Dec 3, 2013 Published
Empire Technology Development LLC	Republic of Korea	10-1639958	10-2015-7000281	Jul 10, 2012 Issued
Empire Technology Development LLC	United States of America		13/642,775	Oct 22, 2012 Published
Empire Technology Development LLC	Japan	6033417	2015-515995	Jun 11, 2012 Issued
Empire Technology Development LLC	United States of America	9525588	13/810496	Jan 16, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1621791	10-2015-7006642	Aug 14, 2012 Issued
Empire Technology Development LLC	United States of America	10154022	15/361622	Nov 28, 2016 Issued
Empire Technology Development LLC	United States of America	9051479	13/879941	Apr 17, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1687925	10-2015-7000192	Jul 3, 2012 Issued
Empire Technology Development LLC	United States of America		13/643,041	REEL: 029483
Empire Technology Development LLC	United States of America	9282153	13/816102	Oct 23, 2012 Published
Empire Technology Development LLC	United States of America	10-1648318	10-2015-7000286	Feb 8, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1687925	10-2015-7000192	Jul 19, 2012 Issued
Empire Technology Development LLC	United States of America	1611737	9954964	Jan 21, 2016 Issued
Empire Technology Development LLC	Taiwan R.O.C.	2013800795356	15/002695	Jul 31, 2013 Issued
Empire Technology Development LLC	China		103126217	Feb 1, 2016 Published
Empire Technology Development LLC	United States of America		201380079535.6	Oct 30, 2015 Issued
Empire Technology Development LLC	United States of America	10017651	14/888386	Feb 11, 2013 Issued
Empire Technology Development LLC	United States of America	8954035	13/816419	Aug 3, 2012 Issued
Empire Technology Development LLC	China	ZL20128003446.5	20128003446.5	Aug 3, 2012 Issued
Empire Technology Development LLC	European Patent Office	2740229	12820278.5	Aug 3, 2012 Issued
Empire Technology Development LLC	Japan	5911037	2014-524108	Aug 3, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1589653	10-2014-7004286	Aug 3, 2012 Issued
Empire Technology Development LLC	Germany	2740229	602012051360.8	Aug 3, 2012 Issued
Empire Technology Development LLC	France	2740229	12820278.5	Aug 3, 2012 Issued
Empire Technology Development LLC	United Kingdom	2740229	12820278.5	Aug 3, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1689945	10-2014-7033567	Aug 3, 2012 Issued
Empire Technology Development LLC	United States of America	9392049	13/823104	Mar 13, 2013 Issued
Empire Technology Development LLC	China	ZL201280074125.8	201280074125.8	Aug 3, 2012 Issued
Empire Technology Development LLC	United States of America		14/901,403	Aug 3, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-1675038	10-2015-7001329	Jun 30, 2012 Issued
Empire Technology Development LLC	United States of America	9251177	13/701197	Mar 13, 2013 Issued
Empire Technology Development LLC	China	ZL201280073925.8	201280073925.8	Jun 19, 2012 Issued
Empire Technology Development LLC	United States of America	9892197	14/995788	Nov 30, 2012 Issued

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REEL: 048373 FRAME: 0392**

COBB_029483

Empire Technology Development LLC	United States of America	9760926	13/810818	Jan 17, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1807456	10-2016-7036397	Dec 26, 2016 Issued
Empire Technology Development LLC	United States of America	9417842	14/006071	Sep 18, 2013 Issued
Empire Technology Development LLC	United States of America	9297768	14/118006	Nov 5, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1489099	103113577	Apr 14, 2014 Issued
Empire Technology Development LLC	China	ZL201380075719.5	201380075719.5	Apr 18, 2013 Issued
Empire Technology Development LLC	United States of America	9132015	13/990309	May 29, 2013 Issued
Empire Technology Development LLC	United States of America	9597187	14/820431	Aug 6, 2015 Issued
Empire Technology Development LLC	United States of America	9283069	14/112275	Oct 17, 2013 Issued
Empire Technology Development LLC	United States of America	9465729	13/982807	Jul 31, 2013 Issued
Empire Technology Development LLC	China	ZL201380074458.5	201380074458.5	Mar 13, 2013 Issued
Empire Technology Development LLC	United States of America	9965385	15/268226	Sep 16, 2016 Issued
Empire Technology Development LLC	China		201711183784.6	REEL: 048373 FRAME: 0393
Empire Technology Development LLC	United States of America	9483736	13/988015	Mar 13, 2013 Published
Empire Technology Development LLC	United States of America	8821261	13/702907	May 16, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1699143	10-2014-7033596	Mar 26, 2013 Published
Empire Technology Development LLC	United States of America	9740375	14/110119	Jun 12, 2012 Issued
Empire Technology Development LLC	United States of America	9171092	13/991382	Jun 3, 2013 Issued
Empire Technology Development LLC	United States of America	9772990	14/851245	Sep 11, 2015 Issued
Empire Technology Development LLC	United States of America	15708517		Sep 19, 2017 Published
Empire Technology Development LLC	United States of America	9919929	15/100616	May 31, 2016 Issued
Empire Technology Development LLC	United States of America	9068099	13/881416	Apr 25, 2013 Issued
Empire Technology Development LLC	United States of America	8785679	13/881540	Apr 25, 2013 Issued
Empire Technology Development LLC	United States of America	9327454	13/878538	Apr 9, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	I593731	102142059	Nov 19, 2013 Issued
Empire Technology Development LLC	United States of America	9567255	14/764302	Jul 29, 2015 Issued
Empire Technology Development LLC	United States of America	9771468	15/394505	Dec 29, 2016 Issued
Empire Technology Development LLC	United States of America	14910,874		Feb 8, 2016 Published
Empire Technology Development LLC	United States of America	9283096	14/129864	Dec 27, 2013 Issued
Empire Technology Development LLC	United States of America	9210051	14/004902	Sep 12, 2013 Issued
Empire Technology Development LLC	China	ZL201280075765.0	201280075765.0	Sep 12, 2012 Issued
Empire Technology Development LLC	United States of America	9713480	14/356391	May 5, 2014 Issued
Empire Technology Development LLC	United States of America	9852000	14/915217	Feb 26, 2016 Issued
Empire Technology Development LLC	United States of America	9101840	13/878126	Apr 5, 2013 Issued

Empire Technology Development LLC	United States of America	9364763	14/739443	Jun 15, 2015 Issued
Empire Technology Development LLC	Taiwan R.O.C.	156980	103102966	Jan 27, 2014 Issued
Empire Technology Development LLC	United States of America	9707583	14/766971	Aug 10, 2015 Issued
Empire Technology Development LLC	United States of America	9612961	14/363792	Jun 7, 2014 Issued
Empire Technology Development LLC	China		201380079176.4	Aug 29, 2013 Published
Empire Technology Development LLC	United States of America		15/474,577	Mar 30, 2017 Published
Empire Technology Development LLC	United States of America		13/885,996	May 16, 2013 Marked for Impairing
Empire Technology Development LLC	United States of America	9043923	13/885160	May 13, 2013 Issued
Empire Technology Development LLC	United States of America	9436814	14/426157	Mar 4, 2015 Issued
Empire Technology Development LLC	Republic of Korea	10-1731934	10-2015-7022931	Jan 22, 2013 Issued
Empire Technology Development LLC	United States of America	9361416	13/994882	Jun 17, 2013 Issued
Empire Technology Development LLC	United States of America	9760244	14/009095	Sep 30, 2013 Issued
Empire Technology Development LLC	United States of America	9498315	14/031056	Sep 19, 2013 Issued
Empire Technology Development LLC	United States of America	9498315	14/769,818	Aug 23, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9602576	14/350038	Apr 4, 2014 Issued
Empire Technology Development LLC	United States of America	15/463,862		Mar 20, 2017 Published
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Empire Technology Development LLC	United States of America	9304795	13/977670	Jun 28, 2013 Issued
Empire Technology Development LLC	China		201380070466.2	Jan 15, 2013 Published
Empire Technology Development LLC	United States of America	9237133	13/876766	Mar 28, 2013 Issued
Empire Technology Development LLC	United States of America	9304790	13/978877	Jul 9, 2013 Issued
Empire Technology Development LLC	China	ZL 2013800719687	201380071968.7	Jan 31, 2013 Issued
Empire Technology Development LLC	United States of America	9021509	14/114524	Oct 28, 2013 Issued
Empire Technology Development LLC	United States of America	9648123	13/988417	May 20, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1717455	10-2015-7014292	Dec 17, 2012 Issued
Empire Technology Development LLC	China	201380079281.8	201380079281.8	Sep 5, 2013 Issued
Empire Technology Development LLC	United States of America	14/916,743		Mar 4, 2016 Published
Empire Technology Development LLC	European Patent Office	13892965.8		Sep 5, 2013 Published
Empire Technology Development LLC	China		201380080723.0	Sep 12, 2013 Allowed
Empire Technology Development LLC	Japan	6247398	2016-541943	Sep 12, 2013 Issued
Empire Technology Development LLC	United States of America	9298502	14/400,557	Nov 12, 2014 Published
Empire Technology Development LLC	United States of America	9493670	14/785477	Oct 4, 2013 Issued
Empire Technology Development LLC	United States of America			Oct 19, 2015 Issued

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REEL: 048373 FRAME: 0394

COBB_029485

Empire Technology Development LLC	United States of America	10023758 14/906540	Jan 20, 2016 Issued
Empire Technology Development LLC	United States of America	9154191 13/980041	Jul 16, 2013 Issued
Empire Technology Development LLC	United States of America	9432088 14/840612	Aug 31, 2015 Issued
Empire Technology Development LLC	United States of America	9564202 14/371180	Jul 9, 2014 Issued
Empire Technology Development LLC	China	2013800793007	Sep 1, 2013 Issued
Empire Technology Development LLC	China	2013800793007	Sep 1, 2013 Pending
Empire Technology Development LLC	United States of America	201811134120	Jan 9, 2017 Published
Empire Technology Development LLC	United States of America	9405666 14/342333	Feb 28, 2014 Issued
Empire Technology Development LLC	United States of America	14/234,380	Aug 22, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9699058 14/238457	Jul 12, 2014 Published
Empire Technology Development LLC	United States of America	9867168 14/783309	Feb 11, 2014 Issued
Empire Technology Development LLC	European Patent Office	13883726.5	Oct 8, 2015 Issued
Empire Technology Development LLC	United States of America	15/863,003	Apr 30, 2013 Published
Empire Technology Development LLC	United States of America	9603012 14/390383	Jan 5, 2018 Published
Empire Technology Development LLC	Republic of Korea	10-1820323	Oct 2, 2014 Issued
Empire Technology Development LLC	United States of America	10-2016-7006807	Aug 19, 2013 Issued
Empire Technology Development LLC	United States of America	14/763,161	Jul 23, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	14/894,999	Dec 1, 2015 Marked for Impairing
Empire Technology Development LLC	China	201380077232.0	Jun 6, 2013 Allowed
Empire Technology Development LLC	United States of America	9356956 14/356150	May 3, 2014 Issued
Empire Technology Development LLC	United States of America	14/351,508	Apr 11, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9747185 13/850671	Mar 26, 2013 Issued
Empire Technology Development LLC	Republic of Korea	10-1478567	May 14, 2013 Issued
Empire Technology Development LLC	Japan	5840716	Mar 26, 2014 Issued
Empire Technology Development LLC	United States of America	9585618 14/237084	Feb 4, 2014 Issued
Empire Technology Development LLC	China	ZL201380078719.0	Aug 5, 2013 Issued
Empire Technology Development LLC	United States of America	14/910,640	Feb 5, 2016 Published
Empire Technology Development LLC	United States of America	9859925 14/785582	Oct 19, 2015 Issued
Empire Technology Development LLC	United States of America	9515902 14/114732	Oct 29, 2013 Issued
Empire Technology Development LLC	China	201380073223.4	Apr 17, 2013 Published
Empire Technology Development LLC	United States of America	9597091 14/118626	Nov 19, 2013 Issued
Empire Technology Development LLC	United States of America	9311153 14/124569	Dec 6, 2013 Issued
Empire Technology Development LLC	China	2013800765306	May 15, 2013 Issued
Empire Technology Development LLC	United States of America	2013800765306	May 14, 2014 Issued
Empire Technology Development LLC	Republic of Korea	9288206 14/358146	Jun 4, 2013 Issued
Empire Technology Development LLC	United States of America	10-1812397	Mar 13, 2014 Marked for Impairing
Empire Technology Development LLC		14/344,795	

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REEL: 048373 FRAME: 0395

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Empire Technology Development LLC	United States of America	9354855	14/351829	Apr 14, 2014 Issued
Empire Technology Development LLC	United States of America	9792062	14/348143	Mar 28, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1753866	10-2015-7035111	May 10, 2013 Issued
Empire Technology Development LLC	China		201380076472.9	May 10, 2013 Published
Empire Technology Development LLC	United States of America	9988491	15/031687	Apr 22, 2016 Issued
Empire Technology Development LLC	European Patent Office		13895980.4	Oct 22, 2013 Marked for Impairing
Empire Technology Development LLC	United States of America	8954993	14/009101	Sep 30, 2013 Issued
Empire Technology Development LLC	United States of America	9479472	14/575809	Dec 18, 2014 Issued
Empire Technology Development LLC	United States of America	9367370	14/468238	Aug 25, 2014 Issued
Empire Technology Development LLC	United States of America	9565075	14/373026	Jul 17, 2014 Issued
Empire Technology Development LLC	United States of America		15/402,389	Jan 10, 2017 Published
Empire Technology Development LLC	China	ZL201380073510.5	201380073510.5	Feb 21, 2013 Issued
Empire Technology Development LLC	United States of America		14/769,753	Aug 21, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America		14/892,525	Nov 19, 2015 Published
Empire Technology Development LLC	United States of America	9274822	14/238470	Feb 11, 2014 Issued
Empire Technology Development LLC	United States of America	1067792	15/104125	Jun 13, 2016 Issued
Empire Technology Development LLC	United States of America	9079108	14/119171	Nov 20, 2013 Issued
Empire Technology Development LLC	United States of America	9358466	14/728645	Jun 2, 2015 Issued
Empire Technology Development LLC	China	ZL201380077113.5	201380077113.5	May 31, 2013 Issued
Empire Technology Development LLC	United States of America	9990293	14/457128	Aug 12, 2014 Issued
Empire Technology Development LLC	United States of America	9648134	14/003770	Sep 5, 2013 Issued
Empire Technology Development LLC	United States of America	9982094	15/031701	Apr 22, 2016 Issued
Empire Technology Development LLC	China	201380080411X	201380080411X	Oct 22, 2013 Issued
Empire Technology Development LLC	European Patent Office		13896041.4	Sep 28, 2016 Allowed
Empire Technology Development LLC	United States of America		15/300,272	Oct 22, 2013 Marked for Impairing
Empire Technology Development LLC	Republic of Korea		10-2016-7029564	Sep 28, 2016 Allowed
Empire Technology Development LLC	China		201480077643.4	Mar 29, 2014 Published
Empire Technology Development LLC	United States of America	9836625	14/364076	Jun 10, 2014 Issued
Empire Technology Development LLC	Republic of Korea		10-2016-7018875	Dec 19, 2013 Allowed
Empire Technology Development LLC	United States of America	10037653	14/376816	Aug 5, 2014 Issued
Empire Technology Development LLC	United States of America	9137011	14/127969	Dec 19, 2013 Issued
Empire Technology Development LLC	United States of America	9621521	14/796238	Jul 10, 2015 Issued
Empire Technology Development LLC	European Patent Office		13886984.7	Jun 13, 2013 Marked for Impairing
Empire Technology Development LLC	United States of America		14/898,369	Dec 14, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9489774	14/235958	Jan 29, 2014 Issued
Empire Technology Development LLC	United States of America	9680864	14/238542	Feb 12, 2014 Issued

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REEL: 048373 FRAME: 0396

COBB_029487

Empire Technology Development LLC	United States of America	9823539	14/901676	Dec 28, 2015 Issued
Empire Technology Development LLC	United States of America	14783,472	201380076779.9	Oct 9, 2015 Published
Empire Technology Development LLC	China	10042621	14/379630	May 30, 2013 Published
Empire Technology Development LLC	China		201380078341.4	Aug 19, 2014 Issued
Empire Technology Development LLC	United States of America	9306963	14/352655	Apr 17, 2014 Issued
Empire Technology Development LLC	United States of America	9853989	15/017982	Feb 8, 2016 Issued
Empire Technology Development LLC	United States of America	14	350,771	Aug 7, 2014 Allowed
Empire Technology Development LLC	United States of America	9389663	14/386300	Sep 18, 2014 Issued
Empire Technology Development LLC	China		201480073940.1	Jan 22, 2014 Published
Empire Technology Development LLC	United States of America	9766681	14/306406	Jun 17, 2014 Issued
Empire Technology Development LLC	United States of America	9760691	14/647079	May 22, 2015 Issued
Empire Technology Development LLC	United States of America	9549036	14/376133	Jul 31, 2014 Issued
Empire Technology Development LLC	United States of America	9374707	14/372008	Jul 11, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1824895	10-2016-7013897	Oct 25, 2013 Issued
Empire Technology Development LLC	United States of America		15/035,472	May 9, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	9424060	14/239970	Feb 20, 2014 Issued
Empire Technology Development LLC	United States of America	9896633	14/414382	Jun 23, 2013 Issued
Empire Technology Development LLC	China	ZL201380078393.1	201380078393.1	Mar 25, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America		15/024,888	Jun 23, 2016 Published
Empire Technology Development LLC	United States of America	15/107,607		May 5, 2014 Issued
Empire Technology Development LLC	Taiwan R.O.C.	1535649	103115944	Dec 17, 2015 Issued
Empire Technology Development LLC	United States of America		9765178	Sep 6, 2016 Published
Empire Technology Development LLC	United States of America	15/123,985	14/907,285	Jan 24, 2016 Published
Empire Technology Development LLC	United States of America		201380078825.9	Jul 23, 2013 Published
Empire Technology Development LLC	China			Aug 22, 2014 Issued
Empire Technology Development LLC	United States of America	9432720	14/380698	Jun 30, 2016 Issued
Empire Technology Development LLC	United States of America	9854294	15/197767	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	9710291	14/241052	Aug 18, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America		14/379,492	Jan 12, 2015 Published
Empire Technology Development LLC	United States of America	10131610	15/032045	Apr 25, 2016 Issued
Empire Technology Development LLC	United States of America	9965310	14/906752	Jan 21, 2016 Issued
Empire Technology Development LLC	China		201480076447.5	Mar 10, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9982093	15/125571	Sep 12, 2016 Issued
Empire Technology Development LLC	United States of America	9501137	14/373897	Jul 22, 2014 Issued

PATENT
REEL: 048373 FRAME: 0397

COBB_029488

Empire Technology Development LLC	China	201380080373.8	Oct 22, 2013 Allowed
Empire Technology Development LLC	United States of America	9531813 14/380372	Aug 21, 2014 Issued
Empire Technology Development LLC	China	201380081397.5	Dec 4, 2013 Allowed
Empire Technology Development LLC	United States of America	9438624 14/384677	Sep 11, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1807441	10-2016-7011581
Empire Technology Development LLC	United States of America	15/867,211	Jan 10, 2018 Published
Empire Technology Development LLC	China	ZL201380081399.4	Dec 5, 2013 Issued
Empire Technology Development LLC	United States of America	9195490 14/347894	Mar 27, 2014 Issued
Empire Technology Development LLC	United States of America	9792135 14/887902	Oct 20, 2015 Issued
Empire Technology Development LLC	United States of America	15/633,235	Jun 26, 2017 Marked for Impairing
Empire Technology Development LLC	Republic of Korea	9692833 14/359247	May 19, 2014 Issued
Empire Technology Development LLC	European Patent Office	10-1781311 13889955.4	Jul 26, 2013 Issued
Empire Technology Development LLC	United States of America	9930114 14/526434	Oct 28, 2014 Issued
Empire Technology Development LLC	United States of America	9760390 14/351070	Apr 10, 2014 Issued
Empire Technology Development LLC	United States of America	9805813 14/649505	Jun 3, 2015 Issued
Empire Technology Development LLC	China	201380079234.3	Aug 30, 2013 Published
Empire Technology Development LLC	United States of America	15/128,895	Sep 23, 2016 Published
Empire Technology Development LLC	China	201480077865.6	Apr 4, 2014 Published
Empire Technology Development LLC	European Patent Office	14888153.5	Apr 4, 2014 Published
Empire Technology Development LLC	United States of America	9632832 14/758404	Jun 29, 2015 Issued
Empire Technology Development LLC	European Patent Office	14884199.2	Feb 27, 2014 Published
Empire Technology Development LLC	United States of America	15/495,126	Apr 24, 2017 Published
Empire Technology Development LLC	United States of America	9203798 14/118992	Nov 20, 2013 Issued
Empire Technology Development LLC	United States of America	15/110,699	Jul 8, 2016 Allowed
Empire Technology Development LLC	United States of America	9678550 14/337748	Jul 22, 2014 Issued
Empire Technology Development LLC	China	2015104344135	Jul 22, 2015 Issued
Empire Technology Development LLC	United States of America	9419993 14/380371	Aug 21, 2014 Issued
Empire Technology Development LLC	United States of America	9466731 14/457960	Aug 12, 2014 Issued
Empire Technology Development LLC	United States of America	9997640 15/252250	Aug 31, 2016 Issued
Empire Technology Development LLC	China	201510388378.8	Jul 3, 2015 Published
Empire Technology Development LLC	United States of America	9508685 14/445991	Jul 29, 2014 Issued
Empire Technology Development LLC	United States of America	9812428 15/299483	Oct 21, 2016 Issued
Empire Technology Development LLC	United States of America	9484328 14/450203	Aug 1, 2014 Issued
Empire Technology Development LLC	United States of America	9124337 14/128201	Dec 20, 2013 Issued
Empire Technology Development LLC	United States of America	9350439 14/812664	Jul 29, 2015 Issued

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REEL: 048373 FRAME: 0398

COBB_029489

Empire Technology Development LLC	China	201380079175.X	Aug 30, 2013 Published
Empire Technology Development LLC	United States of America	10140639 14/373625	Jul 21, 2014 Issued
Empire Technology Development LLC	United States of America	16/198,482	Nov 21, 2018 Pending
Empire Technology Development LLC	United States of America	9994677 15/125576	Sep 12, 2016 Issued
Empire Technology Development LLC	China	201480076348.7	Mar 11, 2014 Published
Empire Technology Development LLC	United States of America	14/370,436	Jul 2, 2014 Allowed
Empire Technology Development LLC	United States of America	9619168 14/376125	Jul 31, 2014 Issued
Empire Technology Development LLC	United States of America	9237165 14/371730	Jul 10, 2014 Issued
Empire Technology Development LLC	China	201380080805.5	Nov 6, 2013 Published
Empire Technology Development LLC	United States of America	15/495,517	Apr 24, 2017 Allowed
Empire Technology Development LLC	United States of America	9630110 14/353238	Apr 21, 2014 Issued
Empire Technology Development LLC	China	201380079766.7	Sep 23, 2013 Published
Empire Technology Development LLC	United States of America	9761051 14/362583	Jun 3, 2014 Issued
Empire Technology Development LLC	United States of America	15/120,446	Aug 19, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	9671973 14/651091	Jun 10, 2015 Issued
Empire Technology Development LLC	United States of America	15/612,452	Jun 2, 2017 Published
Empire Technology Development LLC	United States of America	9619857 14/360288	Apr 10, 2017 Allowed
Empire Technology Development LLC	United States of America	15/483,740	May 22, 2014 Issued
Empire Technology Development LLC	United States of America	9237274 14/364017	Jun 9, 2014 Issued
Empire Technology Development LLC	China	201480074706.0	Feb 7, 2014 Allowed
Empire Technology Development LLC	United States of America	10059591 15/117332	Aug 8, 2016 Issued
Empire Technology Development LLC	United States of America	9811526 14/372407	Jul 15, 2014 Issued
Empire Technology Development LLC	United States of America	9391771 14/390368	Oct 2, 2014 Issued
Empire Technology Development LLC	United States of America	9784692 14/372439	Jul 15, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1864135	Feb 7, 2014 Issued
Empire Technology Development LLC	United States of America	10-2016-7023230	Oct 21, 2016 Published
Empire Technology Development LLC	United States of America	15/306,004	Oct 21, 2016 Issued
Empire Technology Development LLC	United States of America	9946647 15/306021	Nov 19, 2014 Issued
Empire Technology Development LLC	United States of America	9406750 14/548264	Jul 16, 2015 Issued
Empire Technology Development LLC	United States of America	9524960 14/761599	Apr 1, 2014 Published
Empire Technology Development LLC	China	201480078416.3	Oct 21, 2016 Issued
Empire Technology Development LLC	United States of America	9813406 14/370637	Jul 3, 2014 Issued
Empire Technology Development LLC	United States of America	9646178 14/515425	Oct 15, 2014 Issued
Empire Technology Development LLC	China	201510666276.8	Oct 15, 2015 Issued
Empire Technology Development LLC	Republic of Korea	10-1834969	Oct 14, 2015 Issued
Empire Technology Development LLC	United States of America	15/494,109	Apr 21, 2017 Published
Empire Technology Development LLC	United States of America	9684603 14/603277	Jan 22, 2015 Issued

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REEL: 048373 FRAME: 0399

COBB_029490

Empire Technology Development LLC	United States of America	9396564 14/413414	Jan 7, 2015 Issued
Empire Technology Development LLC	United States of America	9312382 14/338217	Jul 22, 2014 Issued
Empire Technology Development LLC	United States of America	15/112,131	Jul 15, 2016 Allowed
Empire Technology Development LLC	United States of America	15/120,751	Aug 23, 2016 Published
Empire Technology Development LLC	United States of America	9589654 14/647075	May 22, 2015 Issued
Empire Technology Development LLC	United States of America	9934862 15/424065	Feb 3, 2017 Issued
Empire Technology Development LLC	United States of America	9607409 14/373829	Jul 22, 2014 Issued
Empire Technology Development LLC	United States of America	10013809 15/470073	Mar 27, 2017 Issued
Empire Technology Development LLC	United States of America	9773293 14/375296	Jul 29, 2014 Issued
Empire Technology Development LLC	United States of America	10152410 14/442093	May 11, 2015 Issued
Empire Technology Development LLC	United States of America	14/758,812	Jul 1, 2015 Published
Empire Technology Development LLC	United States of America	15/125,523	Sep 12, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	9202558 14/457479	Aug 12, 2014 Issued
Empire Technology Development LLC	China	201610045992.9	Jan 22, 2016 Published
Empire Technology Development LLC	United States of America	9418231 14/295286	Jun 3, 2014 Issued
Empire Technology Development LLC	China	ZL201510302592	Jun 3, 2015 Issued
Empire Technology Development LLC	United States of America	9772935 14/488125	Sep 16, 2014 Issued
Empire Technology Development LLC	United States of America	9983991 15/712475	Sep 22, 2017 Issued
Empire Technology Development LLC	China	201580050129.6	Aug 11, 2015 Published
Empire Technology Development LLC	United States of America	14/291,124	May 30, 2014 Marked for Impairing
Empire Technology Development LLC	China	201610157246.9	Mar 18, 2016 Allowed
Empire Technology Development LLC	United States of America	10109852 14/666058	Mar 23, 2015 Issued
Empire Technology Development LLC	United States of America	9575250 14/324074	Jul 3, 2014 Issued
Empire Technology Development LLC	China	201510922695.3	Dec 14, 2015 Published
Empire Technology Development LLC	United States of America	15/202952.6	Dec 29, 2015 Published
Empire Technology Development LLC	European Patent Office	9281065 14/456965	Aug 11, 2014 Issued
Empire Technology Development LLC	United States of America	10040777 14/316527	Jun 26, 2014 Issued
Empire Technology Development LLC	United States of America	9858179 14/430891	Mar 24, 2015 Issued
Empire Technology Development LLC	United States of America	9779463 14/380908	Aug 25, 2014 Issued
Empire Technology Development LLC	China	201480070775.4	Oct 23, 2013 Published
Empire Technology Development LLC	United States of America	9501350 14/492186	Sep 22, 2014 Issued
Empire Technology Development LLC	United States of America	9876562 14/760951	Jul 14, 2015 Issued
Empire Technology Development LLC	United States of America	9195762 14/383720	Sep 8, 2014 Issued
Empire Technology Development LLC	United States of America	9411894 14/873401	Oct 2, 2015 Issued
Empire Technology Development LLC	Republic of Korea	10-1890502	Apr 8, 2014 Issued
Empire Technology Development LLC	United States of America	10-2016-7027140	Jun 24, 2016 Allowed
Empire Technology Development LLC	United States of America	15/107,927	Jun 24, 2016 Allowed

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REEL: 048373 FRAME: 0400

COBB_029491

Empire Technology Development LLC	European Patent Office	3131735	14889450.4	Apr 15, 2014 Issued
Empire Technology Development LLC	France	3131735	14889450.4	Apr 15, 2014 Issued
Empire Technology Development LLC	Germany	3131735	14889450.4	Apr 15, 2014 Issued
Empire Technology Development LLC	United Kingdom	3131735	14889450.4	Apr 15, 2014 Issued
Empire Technology Development LLC	China	2014800760421	201480076042.1	Feb 24, 2014 Issued
Empire Technology Development LLC	United States of America	9769395	14/421101	Jul 6, 2016 Published
Empire Technology Development LLC	United States of America	15/109,833		Feb 11, 2015 Issued
Empire Technology Development LLC	United States of America	15/123,144		Sep 1, 2016 Marked for Impairing
Empire Technology Development LLC	United States of America	9851796	14/482958	Sep 10, 2014 Issued
Empire Technology Development LLC	China	ZL201510571928X	201510571928.X	Sep 9, 2015 Issued
Empire Technology Development LLC	United States of America	9586371	14/475360	Sep 2, 2014 Issued
Empire Technology Development LLC	United States of America	10144152	15/508416	Mar 2, 2017 Issued
Empire Technology Development LLC	United States of America	15/309,393		Nov 7, 2016 Published
Empire Technology Development LLC	United States of America	9575534	14/391640	Oct 9, 2014 Issued
Empire Technology Development LLC	United States of America	15/436,078		Feb 17, 2017 Published
Empire Technology Development LLC	United States of America	9786297	14/420858	Feb 10, 2015 Issued
Empire Technology Development LLC	United States of America	15/729,126		Oct 10, 2017 Published
Empire Technology Development LLC	United States of America	14/329,795		Jul 11, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9406152	14/334465	Jul 17, 2014 Issued
Empire Technology Development LLC	United States of America	15/106,851		Jun 21, 2016 Published
Empire Technology Development LLC	United States of America	10005235	14/479817	Sep 8, 2014 Issued
Empire Technology Development LLC	United States of America	14/649,894		May 20, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	9783647	14/282055	Jun 4, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9635529	14/297450	Jun 5, 2014 Issued
Empire Technology Development LLC	United States of America	9563620	14/293363	Jun 2, 2014 Issued
Empire Technology Development LLC	United States of America	10084343	14/304653	Jun 13, 2014 Issued
Empire Technology Development LLC	China	201510328894.1	201510328894.1	Jun 15, 2015 Issued
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Empire Technology Development LLC	United States of America	9858111	14/308262	Aug 24, 2018 Pending
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Empire Technology Development LLC	United States of America	9747035	14/573259	Jan 8, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	9729201	14/405084	Dec 17, 2014 Issued
Empire Technology Development LLC	United States of America	9619867	14/413223	Dec 2, 2014 Issued
Empire Technology Development LLC	United States of America	9760912	14/311807	Jan 6, 2015 Issued
Empire Technology Development LLC	United States of America	15/700,907		Jun 23, 2014 Issued
Empire Technology Development LLC	United States of America			Sep 11, 2017 Published

Empire Technology Development LLC	United States of America	9824750	14/630644	Feb 24, 2015 Issued
Empire Technology Development LLC	United States of America	9369477	14/290883	May 29, 2014 Issued
Empire Technology Development LLC	China	10069324	14/480007	Sep 8, 2014 Issued
Empire Technology Development LLC	United States of America	ZL201510680693.8	201510680693.8	Sep 8, 2015 Issued
Empire Technology Development LLC	United States of America	9944800	14/523458	Aug 10, 2018 Published
Empire Technology Development LLC	United States of America	2015106773065	201510677306.5	Oct 24, 2014 Issued
Empire Technology Development LLC	European Patent Office	3015513	15190759.9	Oct 19, 2015 Issued
Empire Technology Development LLC	France	3015513	15190759.9	Oct 21, 2015 Issued
Empire Technology Development LLC	United Kingdom	3015513	15190759.9	Oct 21, 2015 Issued
Empire Technology Development LLC	Germany	3015513	602015002543.1	Oct 21, 2015 Issued
Empire Technology Development LLC	United States of America	9916255	14/567278	Dec 11, 2014 Issued
Empire Technology Development LLC	United States of America	9757880	14/596078	Jan 13, 2015 Issued
Empire Technology Development LLC	United States of America	14/496,092		Sep 25, 2014 Marked for Impairing
Empire Technology Development LLC	China	ZL201510683467.5	201510683467.5	Sep 8, 2015 Issued
Empire Technology Development LLC	United States of America	9231916	14/455312	Sep 8, 2014 Published
Empire Technology Development LLC	United States of America	9755961	14/934774	Aug 8, 2014 Issued
Empire Technology Development LLC	United States of America	14/741,328		Nov 6, 2015 Issued
Empire Technology Development LLC	United States of America	9671850	14/325280	Jun 16, 2015 Published
Empire Technology Development LLC	United States of America	9961104	14/558447	Jul 7, 2014 Issued
Empire Technology Development LLC	China	201510863278.6		Dec 2, 2014 Issued
Empire Technology Development LLC	United States of America	9513990	14/494319	Dec 1, 2015 Published
Empire Technology Development LLC	United States of America	9489739	14/458577	Sep 23, 2014 Issued
Empire Technology Development LLC	China	201510483043.4	201510483043.4	Aug 13, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1850586	10-2015-0113317	Aug 7, 2015 Issued
Empire Technology Development LLC	China	10-2018-0041622		Aug 11, 2015 Issued
Empire Technology Development LLC	United States of America	2018109515478		Aug 11, 2015 Pending
Empire Technology Development LLC	United States of America	15/286,222		Aug 7, 2015 Pending
Empire Technology Development LLC	United States of America	9940458	14/454326	Oct 5, 2016 Published
Empire Technology Development LLC	United States of America	9859034	14/665472	Aug 7, 2014 Issued
Empire Technology Development LLC	United States of America	9552228	14/479945	Mar 23, 2015 Issued
Empire Technology Development LLC	United States of America	9965309	14/665726	Sep 8, 2014 Issued
Empire Technology Development LLC	China	201610169458.9		Mar 23, 2015 Published
Empire Technology Development LLC	United States of America	14761,935		Jul 17, 2015 Marked for Impairing
Empire Technology Development LLC	United States of America	14/614,763		Feb 5, 2015 Allowed

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REEL: 048373 FRAME: 0402

COBB_029493

Empire Technology Development LLC	United States of America	9379841	14/438,223	Apr 23, 2015	Marked for Impairing
Empire Technology Development LLC	United States of America	14/437,831	14/437,831	Mar 25, 2015	Issued
Empire Technology Development LLC	China	201480083563.X	201480083563.X	Apr 22, 2015	Published
Empire Technology Development LLC	United States of America	14/651,191	14/651,191	Nov 21, 2014	Published
Empire Technology Development LLC	United States of America	14/858,979	14/858,979	Jun 10, 2015	Published
Empire Technology Development LLC	United States of America	14/858,970	14/858,970	Sep 18, 2015	Allowed
Empire Technology Development LLC	United States of America	14/859,096	14/859,096	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/859,108	14/859,108	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/858,947	14/858,947	Sep 18, 2015	Published
Empire Technology Development LLC	United States of America	14/761,253	14/761,253	Jul 15, 2015	Published
Empire Technology Development LLC	United States of America	14/787,322	14/787,322	Oct 27, 2015	Published
Empire Technology Development LLC	United States of America	10116970	15/581758	Apr 28, 2017	Issued
Empire Technology Development LLC	Japan	5233006	2006-326659	Dec 4, 2006	Issued
Empire Technology Development LLC	United States of America	8377708	12/665704	Dec 18, 2009	Issued
Empire Technology Development LLC	United States of America	9248439	14/412000	Dec 30, 2014	Issued
Empire Technology Development LLC	United States of America	9817002	14/410,524	Dec 22, 2014	Published
Empire Technology Development LLC	United States of America	ZL201280073378.3	201280073378.3	Mar 13, 2015	Issued
Empire Technology Development LLC	China			Aug 6, 2012	Issued

SCHEDULE II
PATENT LICENSES

Attached.

SCHEDULE II TO PATENT SECURITY AGREEMENT

PATENT
REEL: 048373 FRAME: 0404
COBB_029495

Licensor	Grantor/Licensor	Country	Patent	Application Number	Application Filing Date	Status
Akita University	Empire Technology Development LLC	Japan	4904497	2006-34721	Dec 25, 2006 Filed	Issued
Ama University and ABC Research	Empire Technology Development LLC	United States of America	8039640	12/752114	Jun 24, 2009 Filed	Issued
Ama University and ABC Research	Empire Technology Development LLC	United States of America	8307266	12/487313	Jun 18, 2009 Filed	Issued
Ama University and ABC Research	Empire Technology Development LLC	India	8527852	13/652269	Oct 15, 2012 Filed	Issued
Ama University and ABC Research	Empire Technology Development LLC	India	8665697	12/645709	Sep 2, 2008 Published	Published
Ama University and ABC Research	Empire Technology Development LLC	United States of America	7920599	12/726960	Dec 23, 2005 Filed	Issued
Ama University and ABC Research	Empire Technology Development LLC	United States of America	21201080065905.7	201080065905.7	Mar 18, 2010 Filed	Issued
Ama University and ABC Research	Empire Technology Development LLC	China	5378609	2012-551695	Sep 14, 2010 Filed	Issued
Brijgwan Mahavir Medical Research Center	Empire Technology Development LLC	Japan	10-1412989	2010-7023018	Sep 14, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	8526525	12/255572	Oct 21, 2008 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	India	8224261	12/661010	Sep 1, 2008 Published	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	ZL201080034799.6	201080034799.6	Nov 17, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	China	8639639	12/624374	Jul 1, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9111272	12/731323	Nov 23, 2008 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	8682879	12/762224	Mar 25, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9183675	13/061316	Apr 16, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9146669	12/874411	Feb 23, 2011 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9444626	14/813916	Aug 21, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9830444	15/224555	Jul 30, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	China	201080065979.9	201080065979.9	Nov 29, 2010 Filed	Marked for Impairing
B2imodeline Co., Ltd.	Empire Technology Development LLC	European Patent Office	10858541.8	10858541.8	Nov 29, 2010 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	14/796.888	14/796.888	Jul 10, 2015 Filed	Marked for Impairing
B2imodeline Co., Ltd.	Empire Technology Development LLC	China	10-1462571	2010-0472008	Nov 29, 2010 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	5512831	2010-12-54881	Dec 15, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	Japan	201080066830.4	201080066830.4	Dec 15, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	China	10-1383982	2010-12-702669	Aug 6, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	Japan	5632073	2013-13-51094	Aug 6, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	China	21201080054686.5	201080054686.5	Dec 27, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	5562437	2012-5-45865	Aug 19, 2014 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9618531	14/79744	Aug 19, 2014 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	8826975	13/673916	Nov 9, 2012 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9086953	13/919823	Mar 8, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9916197	18/728749	Jun 2, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9946475	14/443349	May 15, 2014 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	Republic of Korea	10-1710025	2010-05-702938	Dec 27, 2010 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	10-1889451	14/899.829	Aug 18, 2015 Filed	Marked for Impairing
B2imodeline Co., Ltd.	Empire Technology Development LLC	Japan	6276837	2016-53208	Aug 21, 2014 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	14/451.859	2016-07-2015549	Aug 5, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9953271	14/454071	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	10-1866829	2016-10-2015481	Aug 5, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	6212217	2016-532125	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	148037093	2016-07-2015549	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9858534	14/451.859	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	10-1866830	2016-10-2015549	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	6212216	2016-10-53211	Nov 22, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	14804080	14/864080	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	15/856.819	2017-07-2015481	Nov 22, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9039557	14/502.864	Nov 22, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9203654	14/72046	Nov 22, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9219486	14/479269	Nov 22, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	9473115	14/944925	Nov 22, 2013 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	10-1695945	2010-05-101548	Nov 21, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	3072237	14/862587	Dec 28, 2017 Filed	Marked for Impairing
B2imodeline Co., Ltd.	Empire Technology Development LLC	Germany	602010801368.8	2010-05-31227	Sep 30, 2014 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United Kingdom	3072237	14/862587	May 29, 2015 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	18182228.9	2010-05-3075.2	May 29, 2015 Filed	Issued
B2imodeline Co., Ltd.	Empire Technology Development LLC	China	2018001477.2	2018001477.2	Oct 24, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	15/112.156	2015-07-201548	Oct 24, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	10-2016-021326	2015-07-201548	Oct 24, 2014 Filed	Published
B2imodeline Co., Ltd.	Empire Technology Development LLC	United States of America	10-2016-026705	2015-07-201548	Feb 12, 2015 Filed	Published

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California Institute of Technology ('Caltech')	United States of America	14/451,955	Aug 5, 2014 Published
California Institute of Technology ('Caltech')	European Patent Office	157611773	Aug 31, 2015 Published
California Institute of Technology ('Caltech')	United States of America	14/793,328	Feb 12, 2015 Published
California Institute of Technology ('Caltech')	Republic of Korea	10.2015.0085743	Jul 16, 2016 Published
Empire Technology Development LLC	China	20161054833.5	Jul 7, 2016 Published
Empire Technology Development LLC	United States of America	16172168.3	
Empire Technology Development LLC	United States of America	8603739 12/5/115	Aug 23, 2016 Published
Empire Technology Development LLC	United States of America	8518242 12/7/2523	Aug 23, 2016 Published
Empire Technology Development LLC	Japan	5581405 2012-57359	Aug 23, 2016 Published
Empire Technology Development LLC	China	2010/080065514.5	Aug 23, 2016 Published
Empire Technology Development LLC	United States of America	8402567 12/7/5553	Aug 23, 2016 Published
Empire Technology Development LLC	United States of America	8703313 12/7/62500	Aug 23, 2016 Published
Empire Technology Development LLC	Japan	5552192 2013-50469	Aug 23, 2016 Published
Empire Technology Development LLC	China	ZL201008066103.8 2010/08066103.8	Aug 23, 2016 Published
Empire Technology Development LLC	United States of America	9515307 14/71436	Dec 15, 2016 Issued
Empire Technology Development LLC	United States of America	9001318 12/8/13757	Dec 15, 2016 Issued
Empire Technology Development LLC	United States of America	8375721 12/8/13793	Dec 15, 2016 Issued
Empire Technology Development LLC	United States of America	8835561 13/4/03922	Jan 11, 2017 Issued
Empire Technology Development LLC	United States of America	8737225 13/9/9875	Jan 11, 2017 Issued
Empire Technology Development LLC	United States of America	9258759 14/2/84311	Jan 11, 2017 Issued
Empire Technology Development LLC	United States of America	9127363 14/4/36783	Jan 11, 2017 Issued
Empire Technology Development LLC	China	2014/007788.7	Jan 11, 2017 Issued
Dalian University of Technology	China	9785769 14/4/38517	Apr 7, 2018 Issued
Dalian University of Technology	United States of America	2014/007348.8	Apr 7, 2018 Issued
Dalian University of Technology	China	10.157,219 14/9/1,366	Apr 19, 2018 Issued
Dalian University of Technology	United States of America	8822955 13/05306	Dec 15, 2018 Issued
Dalian University of Technology	United States of America	8653230 13/03034	Dec 15, 2018 Issued
Dalian University of Technology	United States of America	10087269 14/7-49611	Feb 13, 2019 Issued
Dalian University of Technology	United States of America	88787188 13/8/11609	Feb 13, 2019 Issued
Dalian University of Technology	United States of America	9482619 14/15/2320	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201180072431.3 2011/0072431.3	Feb 23, 2019 Issued
Dalian University of Technology	Japan	5852245 2014-5-2830	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9493351 13/8/11835	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201180074666.3 2011/007466.3	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	5836497 2014-5-2675	Feb 23, 2019 Issued
Dalian University of Technology	Japan	8822384 13/8/14610 2018/007231.3	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201180072511.9 2011/0072511.9	Feb 23, 2019 Issued
Dalian University of Technology	Japan	5813878 2014-5-31067 2014/0072511.9	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9821256 14/4/07575 2014/0072511.9	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	1596191 10/21/05927 2014/0072511.9	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201180074666.3 2011/007466.3	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9388776 14/0/000707 2018/0071706.6	Feb 23, 2019 Issued
Dalian University of Technology	China	2L201280071706.5 2012/0071706.5	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	8518499 13/8/13065 2012/0071706.5	Feb 23, 2019 Issued
Dalian University of Technology	Taiwan R.O.C.	1468300 2012/01948 2012/0071706.5	Feb 23, 2019 Issued
Dalian University of Technology	Taiwan R.O.C.	1557212 10/21/14801 2012/0071706.5	Feb 23, 2019 Issued
Dalian University of Technology	Taiwan R.O.C.	1542666 10/31/1874 2012/0071706.5	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9976081 14/7/87589 2012/0071706.5	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201380076051.5 2013/0076051.5	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9498410 14/4/31018 2013/0076051.5	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201280076123.2 2012/0076123.2	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9410051 14/4/35842 2012/0076123.2	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9790346 14/8/89392 2012/0076123.2	Feb 23, 2019 Issued
Dalian University of Technology	Taiwan R.O.C.	1636951 10/24/07716 2012/0076123.2	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	14/651,116 14/651,116 2012/0076123.2	Feb 23, 2019 Issued
Dalian University of Technology	China	ZL201380078289.2 2013/0078289.2	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	14/9/037,327 2013/0078289.2	Feb 23, 2019 Issued
Dalian University of Technology	China	2L201380078289.2 2013/0078289.2	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	10002720 14/7/73216 2013/0078289.2	Feb 23, 2019 Issued
Dalian University of Technology	Taiwan R.O.C.	1614331 10/31/20737 2013/0078289.2	Feb 23, 2019 Issued
Dalian University of Technology	United States of America	9908780 15/0/30583 2013/0078289.2	Feb 23, 2019 Issued
Dalian University of Technology	China	2013/0080614.9 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	United States of America	15/3/06,420 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	China	2018/0078011-X 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	United States of America	15/3/01,580 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	United States of America	15/3/01,715 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	United States of America	10007190 15/0/33002 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	United States of America	10000448 15/1/24397 2013/0080614.9	Feb 23, 2019 Issued
East China University of Science and Technology	United States of America	15/3/16,429 2013/0080614.9	Feb 23, 2019 Issued

PATENT
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Indian Institute of Science	United States of America	8646167 12/5/2019	Aug 28, 2009 Issued
Indian Institute of Science	United States of America	9603331 14/1/2023	Jan 10, 2014 Issued
Indian Institute of Science	India	8226927 07/6/2009	Apr 2, 2009 Published
Indian Institute of Science	United States of America	8226927 12/7/2001	Mar 17, 2010 Issued
Empire Technology Development LLC	United States of America	7982371 12/7/18159	Mar 5, 2010 Issued
Empire Technology Development LLC	United States of America	8580108 13/161218	Jun 15, 2011 Issued
Empire Technology Development LLC	United States of America	8630971 12/6/25608	Jan 5, 2010 Issued
Empire Technology Development LLC	China	2L201080045971.8	Sept 8, 2010 Issued
Empire Technology Development LLC	Japan	5806224 2012/5/39439	Sept 8, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1665903 10-2012/708780	Sept 8, 2010 Issued
Empire Technology Development LLC	Australia	2010320612 10831220.9	Sept 8, 2010 Published
Empire Technology Development LLC	European Patent Office	8503544 12/7/71730	Apr 30, 2010 Issued
Empire Technology Development LLC	United States of America	8804858 13/9/33775	Jul 12, 2013 Issued
Empire Technology Development LLC	United States of America	8838271 13/9/662	Feb 15, 2012 Issued
Empire Technology Development LLC	United States of America	882344 13/7/39223	Jun 10, 2011 Issued
Empire Technology Development LLC	United States of America	9207854 13/7/6542	Dec 6, 2011 Issued
Empire Technology Development LLC	United States of America	9112479 13/7/5288	Oct 19, 2011 Issued
Empire Technology Development LLC	United States of America	9013092 13/1/39413	Jun 13, 2011 Issued
Empire Technology Development LLC	European Patent Office	10832468.7	Nov 22, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8594167 10/8/2468	Oct 20, 2011 Issued
Empire Technology Development LLC	Japan	5711293 2013/5/2371	Nov 4, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1510564 10-2103717	Nov 4, 2010 Issued
Empire Technology Development LLC	United States of America	9138408 12/8/69020	Aug 26, 2010 Issued
Empire Technology Development LLC	United States of America	9297671 14/8/42502	Sept 1, 2013 Issued
Empire Technology Development LLC	United States of America	9171688 13/9/9015	Jun 13, 2013 Issued
Empire Technology Development LLC	United States of America	8310679 13/3/1801	Nov 2, 2011 Issued
Empire Technology Development LLC	United States of America	8911636 12/8/1988	Jun 21, 2010 Issued
Empire Technology Development LLC	United States of America	8805111 12/7/70868	Feb 9, 2010 Issued
Empire Technology Development LLC	United States of America	8034622 12/6/2956	Nov 23, 2009 Issued
Empire Technology Development LLC	United States of America	8320397 12/7/5718	Apr 7, 2010 Issued
Empire Technology Development LLC	United States of America	8410177 12/7/1774	Mar 4, 2010 Issued
Empire Technology Development LLC	United States of America	8034621 12/7/5348	Aug 18, 2009 Issued
Empire Technology Development LLC	United States of America	8345990 12/6/27408	Nov 30, 2009 Issued
Empire Technology Development LLC	China	ZL201080034465.9 201080034465.9	Jul 2, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1289586 10-2012/701806	Jul 2, 2010 Issued
Empire Technology Development LLC	United States of America	9202141 13/6/92564	Dec 3, 2012 Issued
Empire Technology Development LLC	United States of America	8781160 12/6/50894	Dec 31, 2009 Issued
Empire Technology Development LLC	United States of America	833548 12/6/37180	Dec 14, 2009 Issued
Empire Technology Development LLC	United States of America	8476007 12/7/8953	Feb 19, 2010 Issued
Empire Technology Development LLC	United States of America	8703505 13/9/32711	Jul 1, 2013 Issued
Empire Technology Development LLC	United States of America	8441645 12/9/84328	Jan 4, 2011 Issued
Empire Technology Development LLC	United States of America	8775558 13/2/57948	Sep 20, 2011 Issued
Empire Technology Development LLC	United States of America	8198794 12/8/4020	Jul 22, 2010 Issued
Empire Technology Development LLC	United States of America	8871390 13/1/39114	Jun 10, 2011 Issued
Empire Technology Development LLC	United States of America	ZL201080068555.X 201080068555.X	Aug 27, 2010 Issued
Empire Technology Development LLC	United States of America	8673503 12/7/96271	Jun 4, 2010 Issued
Empire Technology Development LLC	United States of America	8343471 12/7/40721	Jun 17, 2011 Issued
Empire Technology Development LLC	United States of America	8889175 13/7/25323	Dec 27, 2012 Issued
Empire Technology Development LLC	United States of America	8992883 12/7/94272	Jun 4, 2010 Issued
Empire Technology Development LLC	United States of America	8089314 12/7/64294	Apr 21, 2010 Issued
Empire Technology Development LLC	European Patent Office	2L201080030261.8 201080030261.8	Nov 17, 2010 Issued
Empire Technology Development LLC	United Kingdom	2543141 10/8/6922.2	Nov 17, 2010 Issued
Empire Technology Development LLC	Germany	2543141 60/2010/0676.8	Nov 17, 2010 Issued
Empire Technology Development LLC	France	2543141 10/8/6922.2	Nov 17, 2010 Issued
Empire Technology Development LLC	United States of America	8610616 13/3/90937	Feb 17, 2012 Issued
Empire Technology Development LLC	United States of America	8884989 12/7/03594	Feb 10, 2010 Issued
Empire Technology Development LLC	China	ZL201080062225.X 201080062225.X	Nov 11, 2010 Issued
Empire Technology Development LLC	Japan	5438226 2012/5/45461	Nov 11, 2010 Issued
Empire Technology Development LLC	United States of America	8148158 13/0/23467	Feb 8, 2011 Issued
Empire Technology Development LLC	United States of America	9018892 13/2/65619	Oct 21, 2011 Issued
Empire Technology Development LLC	United States of America	8124416 12/6/20126	Nov 17, 2009 Issued
Empire Technology Development LLC	United States of America	8479082 12/8/24880	Jun 28, 2010 Issued
Empire Technology Development LLC	India	076770/EU/2011	Mar 18, 2011 Published
Empire Technology Development LLC	United States of America	14/9/07/296	Jan 25, 2015 Allowed
Empire Technology Development LLC	European Patent Office	13882295.3	Nov 16, 2013 Marked for Impairing

Indian Institute of Technology Delhi	United States of America	915682 13/8/38562	Mar 15, 2013 Issued
Indian Institute of Technology Delhi	Japan	9947118 14/7/25341	May 27, 2013 Issued
Indian Institute of Technology Delhi	India	2013-510780	May 27, 2013 Issued
Indian Institute of Technology Delhi	United States of America	16/06/2017/2014	May 28, 2014 Pending
Empire Technology Development LLC	India	4097/0EU/2015	Dec 14, 2015 Published
Empire Technology Development LLC	United States of America	8733948 13/14/2843	Jun 29, 2014 Issued
Empire Technology Development LLC	United States of America	14/34/379	Jul 29, 2014 Issued
Empire Technology Development LLC	United States of America	8853932 13/01/303	Jan 31, 2011 Issued
Empire Technology Development LLC	United States of America	8652373 13/14/502	Aug 2, 2011 Issued
Empire Technology Development LLC	Japan	610086 16/06/2017/2014	Jun 13, 2013 Pending
Empire Technology Development LLC	United States of America	8571267 12/8/70569	Aug 27, 2010 Issued
Empire Technology Development LLC	United States of America	8463021 12/8/85649	Sep 16, 2010 Issued
Empire Technology Development LLC	United States of America	9778202 13/8/7894	Mar 12, 2014 Issued
Empire Technology Development LLC	Japan	5701392 2013-53/292	Nov 29, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-1442055 2013-701/2314	Nov 29, 2010 Issued
Empire Technology Development LLC	United States of America	9345773 13/8/8029	Apr 18, 2013 Issued
Empire Technology Development LLC	United States of America	8883303 13/8/82839	May 16, 2013 Issued
Empire Technology Development LLC	United States of America	8569062 13/8/8020	Aug 17, 2013 Issued
Empire Technology Development LLC	United States of America	8524178 13/3/2116	Oct 17, 2011 Issued
Empire Technology Development LLC	United States of America	8801972 13/3/7063	Feb 10, 2012 Issued
Empire Technology Development LLC	United States of America	8504581 13/07/2916	Mar 28, 2011 Issued
Empire Technology Development LLC	United States of America	9311897 13/2/64712	Oct 14, 2011 Issued
Empire Technology Development LLC	China	21201180062695.0 2013-5/28/295.0	Feb 9, 2011 Issued
Empire Technology Development LLC	Japan	5819440 2013-5/46/781	Feb 9, 2011 Issued
Empire Technology Development LLC	Republic of Korea	10-1592272 2013-7/01/8325	Feb 9, 2011 Issued
Empire Technology Development LLC	United States of America	8587881 13/3/59798	Jul 15, 2011 Issued
Empire Technology Development LLC	United States of America	973366 13/5/9478	Oct 27, 2011 Issued
Empire Technology Development LLC	United States of America	9520546 13/9/8248	Mar 28, 2012 Issued
Empire Technology Development LLC	China	21201280057431.0 2013-8/05/7431.0	Mar 9, 2012 Issued
Empire Technology Development LLC	Japan	5914692 2014-5/46/674	Mar 9, 2012 Issued
Empire Technology Development LLC	India	3179/0EU/2011	Dec 19, 2011 Published
Empire Technology Development LLC	United States of America	8545945 13/3/59798	Sep 3, 2013 Issued
Empire Technology Development LLC	United States of America	9527730 14/0/16281	May 29, 2012 Issued
Empire Technology Development LLC	United States of America	9809466 13/4/82564	Nov 13, 2013 Issued
Empire Technology Development LLC	United States of America	9576767 14/8/91046	Dec 10, 2013 Issued
Empire Technology Development LLC	Taiwan R.O.C.	102145412 2012-10/27/26	Aug 25, 2014 Issued
Empire Technology Development LLC	United States of America	9515273 14/3/80256	Mar 18, 2015 Issued
Empire Technology Development LLC	United States of America	10007883 14/4/28064	Dec 28, 2013 Issued
Empire Technology Development LLC	China	2018080682.5 2018-10/08/0682.5	Apr 1, 2016 Issued
Empire Technology Development LLC	United States of America	981453 15/0/20705	Oct 15, 2015 Issued
Empire Technology Development LLC	China	9660097 14/7/82600	Apr 3, 2015 Issued
Empire Technology Development LLC	United States of America	2101-5805/205/8 2013-8/05/205/8	Apr 13, 2015 Issued
Empire Technology Development LLC	United States of America	16/4/35/432 2013-8/05/205/8	Oct 17, 2013 Published
Empire Technology Development LLC	India	3233/0EU/2012	Jan 19, 2013 Issued
Empire Technology Development LLC	United States of America	9627840 14/1/31/829	Mar 11, 2013 Issued
Empire Technology Development LLC	United States of America	9536535 14/6/4220	Mar 12, 2013 Issued
Empire Technology Development LLC	China	2120151010904.0 2015/10/10904.0	Aug 19, 2014 Issued
Empire Technology Development LLC	United States of America	9844222 14/6/5280 2014-10/4/1062.9	Aug 20, 2014 Issued
Empire Technology Development LLC	China	212014104/1062.9 2014-10/4/1062.9	Nov 17, 2014 Issued
Empire Technology Development LLC	United States of America	2101-580655380.5 2013-8/06/55380.5	Nov 17, 2014 Issued
Empire Technology Development LLC	United States of America	15/1/00/338 2013-8/06/338	May 30, 2015 Published
Empire Technology Development LLC	European Patent Office	14/86113.5 2013-8/06/113.5	Nov 17, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	14/770/095 2013-7/07/095	Aug 25, 2015 Allowed
Empire Technology Development LLC	China	201480072395.4 2014-8/07/2395.4	Feb 19, 2014 Issued
Empire Technology Development LLC	India	0059/0EU/2014 2014-8/07/2014	Jan 7, 2015 Published
Empire Technology Development LLC	United States of America	15/1/13/263 2013-8/13/263	Jul 28, 2015 Published
Empire Technology Development LLC	United States of America	15/1/22/404 2013-8/12/22/404	Aug 29, 2015 Published
Empire Technology Development LLC	United States of America	9908102 14/6/81070 2013-8/08/1070	Aug 9, 2015 Published
Empire Technology Development LLC	China	2323/0EU/2014 2013-8/08/2014	Aug 6, 2015 Published
Empire Technology Development LLC	India	14/8/18/250 2013-8/18/250	Aug 4, 2015 Published
Empire Technology Development LLC	United States of America	9940868 14/8/83/65 2013-8/08/83/65	Jun 24, 2014 Marked for Impairing
Empire Technology Development LLC	United States of America	2015-10/65314 2015-10/65314	Oct 15, 2015 Issued
Empire Technology Development LLC	China	3033/0EU/2014 2013-8/08/2014	Oct 23, 2015 Issued
Empire Technology Development LLC	India	2015-10/65314 2015-10/65314	Oct 24, 2014 Marked for Impairing
Empire Technology Development LLC	China	9311323 13/8/83/395 2013-8/08/395	Oct 18, 2013 Issued

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Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	European Patent Office	2585015	10854014.7	Sep 2, 2010 Issued
Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	Germany	2585015	602010025115.2	Sep 2, 2010 Issued
Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	United States of America	8553032	13/981700	Jun 28, 2010 Marked for Impairing
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Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	United States of America	9322713	20971/CHE/2011	Jan 28, 2014 Issued
Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	India	8246928	13/078154	Aug 20, 2014 Published
Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	United States of America	8560223	13/55417	Apr 1, 2011 Issued
Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	United States of America	9562814	14/124243	Jul 18, 2012 Issued
Jawaharlal Nehru Centre for Advanced Scientific Research	Empire Technology Development LLC	China	2L201280026128.4	201280026128.4	Jul 5, 2013 Issued
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Koch University Of Technology	Empire Technology Development LLC	India	287/CHE/2012	Jun 7, 2012 Published	
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Koch University Of Technology	Empire Technology Development LLC	Japan	458277	2005-541653	Jul 15, 2008 Issued
Koch University Of Technology	Empire Technology Development LLC	United States of America	8102894	12/653322	Dec 17, 2008 Issued
Koch University Of Technology	Empire Technology Development LLC	Japan	4429847	2004-250797	Aug 30, 2004 Issued
Koch University Of Technology	Empire Technology Development LLC	Japan	4216849	2005-511552	Jul 19, 2005 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8428524	10-2012-7012772	Oct 20, 2010 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8415267	13/488177	Aug 27, 2008 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8088439	12/202000	Aug 4, 2012 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8933526	13/867906	Aug 29, 2008 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8137748	12/199748	Aug 27, 2008 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	7816297	12/201990	Aug 29, 2008 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	10-1153076	10-2008-012405	Aug 8, 2008 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	10-0993235	10-2008-012403	Aug 8, 2008 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	ZL201080063048.7	201080063048.7	Dec 20, 2010 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	5596180	2012-5-52789	Dec 20, 2010 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8298433	12/68328	Jan 16, 2010 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	10-1282626	10-2010-0033465	Oct 12, 2010 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	Japan	5568643	2012-5-44402	Dec 20, 2010 Issued
Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	8801976	13/62975	Feb 17, 2010 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	China	ZL201080048505.5	201080048505.5	Oct 14, 2010 Issued
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Korea University Research and Business Foundation	Empire Technology Development LLC	United States of America	9095855	13/55428	Jul 20, 2012 Issued

Korea University Research and Business Foundation	United States of America	7973997 12/5/5047	Aug 31, 2009 Issued
Korea University Research and Business Foundation	United States of America	842604 13/15/080	Jun 1, 2011 Issued
Korea University Research and Business Foundation	Japan	5286450 2012-526657	Aug 26, 2010 Issued
Korea University Research and Business Foundation	China	2473878 2010/0049194-4	Aug 26, 2010 Issued
Korea University Research and Business Foundation	Germany	2473878 2010/0049194-4	Aug 26, 2010 Issued
Korea University Research and Business Foundation	United Kingdom	602010052158.8 10812294-6	Aug 26, 2010 Issued
Korea University Research and Business Foundation	France	2473878 10812294-6	Aug 26, 2010 Issued
Korea University Research and Business Foundation	United States of America	8062568 12/5/48959	Aug 27, 2009 Issued
Korea University Research and Business Foundation	United States of America	8920696 13/246593	Aug 27, 2011 Issued
Korea University Research and Business Foundation	Republic of Korea	10-1312001 10-2011-7018195	Aug 27, 2010 Issued
Korea University Research and Business Foundation	China	5308541 2011-15/5076	Aug 27, 2010 Issued
Korea University Research and Business Foundation	Japan	5701340 2013-136483	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8147704 12/5/00946	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8608468 13/404748	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8592732 12/5/49012	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	5572214 2012-5/2661	Aug 27, 2010 Issued
Korea University Research and Business Foundation	China	21201080037959.2 2010/0037959.2	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9370047 14/054676	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8536500 12/6/50538	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	10-1178287 10-2010-00194-94	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8920681 12/6/50175	Aug 27, 2009 Issued
Korea University Research and Business Foundation	United States of America	10-1178289 10-2010-0019504	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9558663 14/5/5958	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8535571 12/6/50225	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	10-1178288 10-2010-0019500	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9243111 14/072049	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8429792 12/5/4875	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8421189 12/6/5219	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8029869 12/5/0094	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	10-131388 10-2011-701969	Aug 27, 2010 Issued
Korea University Research and Business Foundation	Japan	5583752 2012-5/01947	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8741417 12/7/62183	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9164198 14/2/60088	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8342425 12/5/9128.	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	10-1343014 10-2012-012209	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	5337309 2012-5/3402	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8202436 12/6/42556	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8221289 12/4/6300	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9158680 13/5/5940	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	5550722 2012-5/14897	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	10797563	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8553086 12/5/07718	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9105215 14/054679	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	9126836 12/6/5110	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	10077191 14/8/13687	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8221592 12/6/20761	Aug 27, 2010 Issued
Korea University Research and Business Foundation	United States of America	8470256 13/4/95266	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United States of America	9197902 13/2/74748	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	Japan	5640157 10-2013-540556	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United States of America	10-1490153 10-2013-7017215	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United States of America	8451147 13/3/20368	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	China	21201080068043.3 2010/0068043.3	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	Republic of Korea	10-1451254 10-2013-003963	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	Germany	11201005747.8 Oct 18, 2010 Published	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United States of America	9468242 13/6/6128 Oct 25, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	China	2L201180067231.9 2011/0067231.9 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	Japan	5687773 2013-547916 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	Republic of Korea	10-1504-77 2013-200643 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	European Patent Office	2661816 11834899.9 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	France	2661816 11834899.9 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	Germany	2661816 11834899.9 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United Kingdom	2661816 11834899.9 Feb 24, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	India	2661816 0060/CHE/2011 Jan 7, 2011 Published	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United States of America	8570203 13/3/89562 Feb 8, 2011 Issued	Aug 27, 2010 Issued
M.S. Ramaiah School of Advanced Studies	United States of America	910004 14/054730 Oct 15, 2011 Issued	Aug 27, 2010 Issued
Mantra Institute of Technology	United States of America	8929622 12/6/260 Dec 9, 2009 Issued	Aug 27, 2010 Issued

PATENT
REEL: 048373 FRAME: 0414

COBB_029505

Manitai Institute of Technology	United States of America	9516346 12/6/27/37	Nov 30, 2009 Issued
Manitai Institute of Technology	United States of America	9186047 13/3/7/35	Nov 29, 2011 Issued
Manitai Institute of Technology	India	8295280 12/7/26/95	Sep 16, 2009 Issued
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Empire Technology Development LLC	China	ZL201080069132.X	Dec 1, 2010 Issued
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Empire Technology Development LLC	Japan	5512889 2013-5/17/564	Dec 1, 2010 Issued
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Empire Technology Development LLC	Japan	2015-5/02/29	Mar 28, 2015 Issued
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Empire Technology Development LLC	United States of America	9288126 12/8/15/360	Apr 6, 2016 Issued
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Empire Technology Development LLC	United States of America	2,711,892	Jul 30, 2010 Issued
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Empire Technology Development LLC	United States of America	8982192 13/7/02/102	Apr 7, 2017 Issued
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Empire Technology Development LLC	China	2008/10/04/1376.1	Jul 28, 2010 Issued
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Empire Technology Development LLC	United States of America	2013-5/16/62	Nov 18, 2010 Issued
Empire Technology Development LLC	United States of America	8847948 13/7/01/87	Nov 18, 2010 Issued
Empire Technology Development LLC	United States of America	8847948 13/7/01/87	Nov 18, 2010 Issued
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Empire Technology Development LLC	United States of America	974455 14/4/27/307	May 8, 2015 Published
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Empire Technology Development LLC	China	2L201180/07/4302.8	Feb 6, 2013 Issued
Empire Technology Development LLC	Japan	5901776 2011/80/07/4302.8	Feb 6, 2013 Issued
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Empire Technology Development LLC	United States of America	10-1595928	Nov 10, 2011 Issued
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Empire Technology Development LLC	China	ZL201380076565.1	Mar 22, 2013 Issued
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Empire Technology Development LLC	United States of America	8474606 12/6/28/064	Nov 30, 2008 Issued
Empire Technology Development LLC	United States of America	896604 13/9/15/195	Jun 30, 2013 Issued
Empire Technology Development LLC	United States of America	8153437 12/7/70/952	Mar 10, 2010 Issued
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Empire Technology Development LLC	Japan	590533 2011/80/06/1852.6	Feb 24, 2011 Issued
Empire Technology Development LLC	United States of America	9453942 13/4/92/011	Jun 8, 2012 Issued

PATENT
REEL: 048373 FRAME: 0415

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New Jersey Institute of Technology	United States of America	8587490	12/5/10040	Jul 27, 2009 Issued	
New Jersey Institute of Technology	Japan	5355793	2012-52283	Jun 11, 2010 Issued	
New Jersey Institute of Technology	United States of America	9041612	14/058147	Oct 18, 2013 Issued	
New Jersey Institute of Technology	United States of America	8159952	12/368516	Feb 10, 2009 Issued	
New Jersey Institute of Technology	European Patent Office	2239895	10/1347016	Apr 8, 2008 Issued	
New Jersey Institute of Technology	Japan	5203402	2010-024884	Feb 25, 2010 Issued	
New Jersey Institute of Technology	United States of America	602010022662.0	Feb 25, 2010 Issued	Feb 25, 2010 Issued	
New Jersey Institute of Technology	United Kingdom	2239895	10/1347016	Feb 25, 2010 Issued	
New Jersey Institute of Technology	France	2239895	10/1347016	Feb 25, 2010 Issued	
New Jersey Institute of Technology	United States of America	8200034	12/422683	Apr 13, 2009 Issued	
New Jersey Institute of Technology	United States of America	8306530	12/455238	Jun 16, 2009 Issued	
New Jersey Institute of Technology	China	2L201080034269.5	2010-080034269.5	Jun 11, 2010 Issued	
New Jersey Institute of Technology	United States of America	8537892	12/422138	Feb 8, 2010 Issued	
New Jersey Institute of Technology	United States of America	8184627	12/396139	Mar 2, 2009 Issued	
New Jersey Institute of Technology	United States of America	8310930	12/479438	Jun 5, 2008 Issued	
New Jersey Institute of Technology	China	2L201080024841.6	2010-080024841.6	Jun 3, 2010 Issued	
New Jersey Institute of Technology	Japan	5528546	9215091	13/653215	Oct 15, 2012 Issued
New Jersey Institute of Technology	United States of America	2L201080024841.6	2010-080024841.6	Jun 3, 2010 Published	
New Jersey Institute of Technology	United States of America	8675673	12/511424	Jun 3, 2010 Published	
New Jersey Institute of Technology	United States of America	2L201080033402.1	2010-080033402.1	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	9103322	14/1565802	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	10804651.3	10804651.3	Jun 10, 2010 Published	
New Jersey Institute of Technology	United States of America	8788974	12/490293	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	1120002237.2	1120002237.2	Jun 10, 2010 Published	
New Jersey Institute of Technology	United States of America	8385231	12/512655	Jul 29, 2008 Issued	
New Jersey Institute of Technology	United States of America	2L201080033581.9	2010-080033581.9	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	2L201080033162.5	2010-080033162.5	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	10804653.9	10804653.9	Jun 10, 2010 Published	
New Jersey Institute of Technology	United States of America	8281138	12/422677	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	8275019	12/485814	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	8472502	13/592261	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	837946	12/36580	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	8175324	12/25325	Jun 10, 2010 Issued	
New Jersey Institute of Technology	United States of America	8355426	12/430788	Jun 10, 2010 Issued	
New Jersey Institute of Technology	China	2L201010124318.2	2010-10124318.2	Jun 10, 2010 Published	
New Jersey Institute of Technology	China	10-1242650	10-201-0728392	Aug 22, 2012 Issued	
New Jersey Institute of Technology	United States of America	9258361	12/420724	Feb 4, 2009 Issued	
New Jersey Institute of Technology	United States of America	8576896	12/365812	Oct 17, 2008 Issued	
New Jersey Institute of Technology	Japan	5203345	2009-287081	Oct 17, 2008 Issued	
New Jersey Institute of Technology	United States of America	8351766	12/723578	Oct 17, 2008 Issued	
New Jersey Institute of Technology	China	2L201080021246.7	2010-080021246.7	Oct 17, 2008 Issued	
New Jersey Institute of Technology	Germany	112010001305	112010001305.5	Oct 17, 2008 Issued	
New Jersey Institute of Technology	United States of America	8902912	13/257305	Sep 18, 2011 Issued	
New Jersey Institute of Technology	China	2L201080043846.2	2010-080043846.2	Nov 3, 2010 Issued	
New Jersey Institute of Technology	United States of America	8487296	12/626077	Nov 25, 2008 Issued	
New Jersey Institute of Technology	Japan	9129803	13/920814	Jun 18, 2013 Issued	
New Jersey Institute of Technology	United States of America	8874230	13/721346	Mar 28, 2011 Issued	
New Jersey Institute of Technology	United States of America	2-270100	10812677.7	Aug 4, 2010 Issued	
New Jersey Institute of Technology	United States of America	2L201080043053.1	2010-080043053.1	Aug 4, 2010 Issued	
New Jersey Institute of Technology	Germany	2-270100	602010045437.1	Aug 4, 2010 Issued	
New Jersey Institute of Technology	France	2-270100	10812677.7	Aug 4, 2010 Issued	
New Jersey Institute of Technology	United Kingdom	2-270100	10812677.7	Aug 4, 2010 Issued	

New Jersey Institute of Technology	United States of America	ZL201080035631.7	8521025 12/96772	Det. 8, 2010 Issued
New Jersey Institute of Technology	China	10-1358795	10-2012-006582	Aug 13, 2010 Issued
New Jersey Institute of Technology	Republic of Korea			Aug 13, 2010 Issued
New Jersey Institute of Technology	United States of America			Jun 29, 2011 Issued
New Jersey Institute of Technology	United States of America			Jul 2, 2011 Issued
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New Jersey Institute of Technology	United States of America			Apr 30, 2015 Issued
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New Jersey Institute of Technology	United States of America			Apr 2, 2013 Issued
New Jersey Institute of Technology	United States of America			Jul 22, 2013 Issued
New Jersey Institute of Technology	United States of America			Apr 23, 2013 Issued
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New Jersey Institute of Technology	United States of America			Feb 7, 2013 Issued
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New Jersey Institute of Technology	United States of America			Aug 8, 2012 Issued
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New Jersey Institute of Technology	United States of America			May 24, 2016 Published
New Jersey Institute of Technology	United States of America			Apr 21, 2016 Issued
New Jersey Institute of Technology	United States of America			Mar 9, 2016 Issued
New Jersey Institute of Technology	United States of America			Apr 15, 2015 Issued
New Jersey Institute of Technology	United States of America			May 25, 2010 Issued
New Jersey Institute of Technology	China	10-1597456	10-2014-006582	May 25, 2010 Issued
New Jersey Institute of Technology	China	59501093	9501093 13/981080	May 25, 2010 Issued
New Jersey Institute of Technology	United States of America			Oct 18, 2013 Issued
New Jersey Institute of Technology	United States of America			Jun 11, 2014 Issued
New Jersey Institute of Technology	United States of America			Feb 7, 2013 Issued
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New Jersey Institute of Technology	United States of America			Aug 9, 2013 Issued
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New Jersey Institute of Technology	United States of America			May 24, 2016 Published
New Jersey Institute of Technology	United States of America			Apr 21, 2016 Issued
New Jersey Institute of Technology	United States of America			Mar 9, 2016 Issued
New Jersey Institute of Technology	United States of America			Apr 15, 2015 Issued
New Jersey Institute of Technology	United States of America			May 25, 2010 Issued
New Jersey Institute of Technology	China	ZL200910080821.X	201080075962.X	May 25, 2010 Issued
New Jersey Institute of Technology	United States of America			Oct 19, 2013 Issued
New Jersey Institute of Technology	United States of America			Jun 5, 2008 Issued
New Jersey Institute of Technology	United States of America			Jun 11, 2010 Issued
New Jersey Institute of Technology	United States of America			Sep 7, 2006 Issued
New Jersey Institute of Technology	United States of America			Dec 28, 2008 Issued
New Jersey Institute of Technology	United States of America			Apr 21, 2015 Published
New Jersey Institute of Technology	United States of America			Sep 7, 2005 Issued
New Jersey Institute of Technology	United States of America			Nov 17, 2006 Issued
New Jersey Institute of Technology	United States of America			May 15, 2008 Issued
New Jersey Institute of Technology	United States of America			Oct 11, 2008 Issued
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New Jersey Institute of Technology	United States of America			Oct 31, 2013 Issued
New Jersey Institute of Technology	United States of America			Jun 22, 2016 Published
New Jersey Institute of Technology	China	ZL200850044208.3	200850044208.3	Aug 11, 2008 Issued
New Jersey Institute of Technology	United States of America			Aug 31, 2009 Issued
New Jersey Institute of Technology	United States of America			Jan 11, 2013 Issued
New Jersey Institute of Technology	China	ZL200880004236.5	200880004236.5	Aug 20, 2008 Issued
New Jersey Institute of Technology	United States of America			Aug 31, 2009 Issued
New Jersey Institute of Technology	United States of America			Aug 29, 2008 Published
New Jersey Institute of Technology	China	8097639 12/7529221	8097639 12/7529221	Aug 21, 2008 Issued
New Jersey Institute of Technology	United States of America			Dec 2, 2010 Issued
New Jersey Institute of Technology	United States of America			Dec 7, 2009 Issued
New Jersey Institute of Technology	Japan	5473096	10-156459	Dec 7, 2009 Issued
Peking University	Republic of Korea	10-156459	10-2012-007661	Aug 21, 2009 Issued

Peking University	United States of America	8891857 13/9555846	Jul 31, 2013 Issued
Peking University	United States of America	8842915 13/260109	Sep 23, 2011 Issued
Peking University	China	9661551 13/147394	Aug 3, 2011 Issued
Peking University	United States of America	ZL201080609013.4	Oct 20, 2010 Issued
Peking University	Japan	2013-145004	Jul 8, 2010 Issued
Peking University	United States of America	5965394	Jul 8, 2010 Issued
Peking University	United States of America	2013-516054	Jul 8, 2010 Issued
Peking University	United States of America	15/602,045	Jul 8, 2010 Issued
Peking University	United States of America	8515167 12/515093	May 22, 2017 Published
Peking University	United States of America	8433150 12/515824	Aug 31, 2009 Issued
Peking University	United States of America	8687908 13/853682	Aug 28, 2008 Issued
Peking University	United States of America	2L200910139915.X	Mar 29, 2013 Issued
Peking University	China	200805139915.X	Jul 10, 2008 Issued
Peking University	United States of America	8564533 12/567684	Sep 25, 2009 Issued
Peking University	United States of America	2012-515340	May 20, 2010 Issued
Peking University	Japan	10-1350526	May 20, 2010 Issued
Peking University	United States of America	10-1350526	May 20, 2010 Issued
Peking University	United States of America	8797261 14/024015	Sep 11, 2013 Issued
Peking University	United States of America	9081414 14/311443	Jun 23, 2014 Issued
Peking University	Canada	2,696,910	Mar 15, 2010 Issued
Peking University	United States of America	2,695,610	Mar 15, 2010 Issued
Peking University	China	8437538 12/694840	Sep 29, 2008 Issued
Peking University	United States of America	2L201080043589.3	May 20, 2010 Issued
Peking University	Japan	5557918	May 20, 2010 Issued
Peking University	United States of America	10-1350526	May 20, 2010 Issued
Peking University	United States of America	10-1589172	May 20, 2010 Issued
Peking University	United States of America	8934708 13/837956	May 20, 2010 Issued
Peking University	United States of America	10815921.9	May 20, 2010 Published
Peking University	Brazil	BR1120120069187	May 20, 2010 Published
Peking University	United States of America	8839762 13/394764	Mar 7, 2012 Issued
Peking University	China	2L201080069655.8	Nov 26, 2010 Issued
Peking University	United States of America	8995531 13/257791	Sep 20, 2011 Issued
Peking University	United States of America	10-1436342	Aug 2, 2010 Issued
Peking University	United States of America	10-2013-700549	Aug 2, 2010 Issued
Peking University	United States of America	5746766	Jan 22, 2013 Issued
Peking University	United States of America	9268794 14/602,378	Aug 2, 2010 Published
Peking University	United States of America	10855508.7	Nov 23, 2011 Issued
Peking University	United States of America	9278876 13/322335	Oct 27, 2010 Issued
Peking University	United States of America	2L201080069254.9	Oct 27, 2010 Issued
Peking University	Japan	5750164	Oct 27, 2010 Issued
Peking University	United States of America	2013-534146	Oct 27, 2010 Issued
Peking University	United States of America	108588302	Oct 27, 2010 Marked for Impairing
Peking University	United States of America	9715326 13/920211	Oct 13, 2012 Issued
Peking University	United States of America	2L201180068426.5	Mar 16, 2013 Issued
Peking University	United States of America	2013-1010000	Mar 16, 2013 Issued
Peking University	United States of America	10-1452667	Mar 16, 2013 Issued
Peking University	United States of America	5852135	Mar 16, 2013 Issued
Peking University	United States of America	2013-549694	Mar 16, 2013 Issued
Peking University	United States of America	118802725.8	Mar 16, 2013 Issued
Peking University	United States of America	9546010 13/978700	Mar 16, 2013 Issued
Peking University	United States of America	9212631 13/290146	Mar 16, 2013 Issued
Peking University	United States of America	9235508 14/803074	Mar 16, 2013 Issued
Peking University	United States of America	15/197,458	Mar 16, 2013 Issued
Peking University	United States of America	9411875 13/980573	Mar 16, 2013 Issued
Peking University	United States of America	8178415 12/516493	Mar 16, 2013 Issued
Pritech Inc.	United States of America	806613-183530	Nov 27, 2008 Published
Pritech Inc.	United States of America	8766833 12/51697	Oct 20, 2008 Issued
Pritech Inc.	United States of America	2006-318531	Nov 27, 2008 Published
Pritech Inc.	United States of America	8766802 12/516500	May 27, 2009 Issued
Pritech Inc.	United States of America	2006-318532	Jun 27, 2008 Published
Pritech Inc.	United States of America	8318047 12/516705	Oct 20, 2008 Issued
Pritech Inc.	United States of America	8933784 12/516643	Oct 19, 2008 Issued
Pritech Inc.	United States of America	2006-318337	Nov 28, 2008 Published
Pritech Inc.	United States of America	8767402 12/516715	Oct 20, 2008 Issued
Pritech Inc.	United States of America	2006-318338	Nov 28, 2008 Published
Pritech Inc.	Japan	8237622 12/521244	Jan 12, 2010 Issued
Pritech Inc.	Japan	2006-354774	Dec 28, 2006 Published
Pritech Inc.	Japan	2007-1-55763	Jun 12, 2007 Published
Pritech Inc.	United States of America	8188924 12/152661	May 22, 2008 Issued
Pritech Inc.	United States of America	8440487 13/404667	Feb 24, 2012 Issued
Pritech Inc.	Japan	2005-322371	Nov 7, 2005 Published
Pritech Inc.	United States of America	8154456 12/153662	May 22, 2008 Issued
Pritech Inc.	Japan	8477072 13/414794	Mar 8, 2013 Issued
Pritech Inc.	United States of America	2005-322372	Nov 7, 2005 Published
PSG Institutions	United States of America	15/117,998	Aug 10, 2010 Published
Sakura University	United States of America	8971531 12/770466	Aug 29, 2010 Issued

PATENT
REEL: 048373 FRAME: 0418

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REEL: 048373 FRAME: 0419

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REEL: 048373 FRAME: 0421

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University of British Columbia	United States of America	8519189 13/50841	Apr 27, 2012 Issued
University of British Columbia	United States of America	8627008 13/45889	Apr 27, 2012 Issued
University of British Columbia	United States of America	9095666 14/098184	Dec 5, 2013 Issued
University of British Columbia	United States of America	10111902 14/452408	Feb 23, 2015 Issued
Empire Technology Development LLC	United States of America	15/887,561	Feb 2, 2018 Published
Empire Technology Development LLC	United States of America	9370528 13/324387	Dec 13, 2013 Issued
Empire Technology Development LLC	United States of America	9289584 13/309387	May 11, 2012 Issued
Empire Technology Development LLC	United States of America	9886352 13/824761	Mar 18, 2013 Issued
Empire Technology Development LLC	United States of America	10-1782655	Apr 27, 2012 Issued
Empire Technology Development LLC	Republic of Korea	10-2014-7028428	Apr 27, 2012 Issued
Empire Technology Development LLC	China	2L2012600727284	Apr 27, 2012 Issued
Empire Technology Development LLC	United States of America	15/874,433	Jan 18, 2013 Published
Empire Technology Development LLC	United States of America	12/628,721	Dec 1, 2009 Published
Empire Technology Development LLC	United States of America	8546092 12/634347	Dec 7, 2009 Issued
Empire Technology Development LLC	United States of America	8541645 12/633437	Dec 8, 2009 Issued
Empire Technology Development LLC	United States of America	2L201080066576.0	Jun 8, 2010 Issued
Empire Technology Development LLC	United States of America	108593287	Jun 8, 2010 Issued
Empire Technology Development LLC	United States of America	602010049108.0	Jun 8, 2010 Issued
Empire Technology Development LLC	United Kingdom	602010049108.0	Jun 8, 2010 Issued
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Empire Technology Development LLC	France	2555799	Jun 8, 2010 Issued
Empire Technology Development LLC	China	2L201080052106.6	Nov 10, 2010 Marked for Impairing
Empire Technology Development LLC	Brazil	2L201080052106.6	Nov 10, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	8391602 12/756612	Aug 8, 2010 Issued
Empire Technology Development LLC	United States of America	8564615 13/75272	Aug 31, 2013 Issued
Empire Technology Development LLC	United States of America	8750619 14/742409	Dec 27, 2013 Issued
Empire Technology Development LLC	United States of America	9024011 13/377493	Dec 9, 2011 Issued
Empire Technology Development LLC	United States of America	2L201080067120.3	Mar 15, 2012 Issued
Empire Technology Development LLC	United States of America	2L201080067120.3	Mar 15, 2012 Issued
Empire Technology Development LLC	United States of America	2576030	Sep 2, 2010 Issued
Empire Technology Development LLC	United States of America	60201004988.9	Sep 2, 2010 Issued
Empire Technology Development LLC	France	10852465.3	Sep 2, 2010 Issued
Empire Technology Development LLC	United Kingdom	2576030	Sep 2, 2010 Issued
Empire Technology Development LLC	United States of America	9354170 13/75102	Sep 2, 2010 Issued
Empire Technology Development LLC	United States of America	9002782 13/496705	Oct 16, 2012 Issued
Empire Technology Development LLC	United States of America	2L201080067120.3	Nov 30, 2010 Issued
Empire Technology Development LLC	United States of America	10-1524514	Nov 30, 2010 Issued
Empire Technology Development LLC	United States of America	5629821	Nov 30, 2010 Issued
Empire Technology Development LLC	United States of America	8640068 13/497477	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	5782330	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	2013-5-24-915	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	10-1534121	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	9390213 14/150110	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	0019/KOL/2011	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	9068939 13/503815	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	10-24-2012	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	8638434 13/513068	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	8892344 14/134889	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	9897543 14/364574	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	913450 13/991605	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	2L201260066750.1	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	0095/KOL/2012	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	15/14-629	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	15/14-629	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	9359265 13/825661	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	2L201260066826.2	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	2012-369910	Mar 21, 2012 Issued
Empire Technology Development LLC	Australia	2016/202162	Mar 21, 2012 Issued
Empire Technology Development LLC	India	0154/KOL/2012	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	9459210 13/887271	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	94593763 14/413635	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	075-7007402	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	9715514 13/879804	Mar 21, 2012 Issued
Empire Technology Development LLC	United States of America	14/769,808	Mar 21, 2012 Issued
Empire Technology Development LLC	China	2L201380075562.8	Mar 20, 2013 Issued
Empire Technology Development LLC	United States of America	9322012 14/955780	Aug 8, 2014 Issued
Empire Technology Development LLC	China	ZL201410401014.4	Feb 15, 2012 Published
Empire Technology Development LLC	United States of America	9790529 14/455699	Feb 15, 2012 Published
Empire Technology Development LLC	United States of America	2014-103248.2	Feb 5, 2013 Issued
Empire Technology Development LLC	United States of America	957260 14/309524	Aug 22, 2013 Published
Empire Technology Development LLC	United States of America	14/455387	Aug 2, 2014 Published
Empire Technology Development LLC	United States of America	9748368 14/902480	Dec 31, 2013 Issued
Empire Technology Development LLC	China	201380078344.8	Aug 23, 2013 Issued
Empire Technology Development LLC	United States of America	9748616 14/46420	Aug 20, 2014 Issued

PATENT
REEL: 048373 FRAME: 0423

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University of Seoul Industry Cooperation Foundation	United States of America	8828764 14/225368	Mar 25, 2014 Issued
University of Seoul Industry Cooperation Foundation	United States of America	8671369 12/63375	Dec 8, 2008 Issued
University of Seoul Industry Cooperation Foundation	United States of America	2012-54302	Dec 6, 2010 Issued
University of Seoul Industry Cooperation Foundation	Japan	5537669	Feb 5, 2014 Issued
University of Seoul Industry Cooperation Foundation	United States of America	9147019 14/77422	Jan 28, 2010 Issued
University of Seoul Industry Cooperation Foundation	United States of America	8220782 12/695288	Jan 28, 2010 Issued
University of Seoul Industry Cooperation Foundation	United States of America	8708901 12/65031	Dec 30, 2009 Issued
University of Seoul Industry Cooperation Foundation	United States of America	8289022 12/69652	Jan 29, 2010 Issued
University of Seoul Industry Cooperation Foundation	United States of America	11772766-4	Jan 25, 2011 Published
University of Southern California	United States of America	9444496 13/833486	Feb 17, 2008 Issued
University of Texas at Austin	United States of America	8285900 12/372556	Feb 17, 2008 Issued
University of Texas at Austin	United States of America	8694704 13/615264	Sep 13, 2012 Issued
University of Texas at Austin	United States of America	9571390 14/247098	Apr 7, 2014 Issued
University of Texas at Austin	United States of America	8307116 12/487781	Jun 19, 2008 Issued
University of Texas at Austin	United States of America	8565331 12/9999029	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	2011080068667.5	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	10-1414036	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	5584363	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	5557957	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	8958499 12/997831	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	2006619	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	10-1438536	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	5487363	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	2013-519640	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	2006619	Aug 20, 2010 Issued
University of Texas at Austin	United States of America	8514913 12/999266	Aug 20, 2010 Issued
Empire Technology Development LLC	Republic of Korea	10-2013-7006792	Aug 20, 2010 Issued
Empire Technology Development LLC	Japan	2013-524827	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2006619	Aug 20, 2010 Issued
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Empire Technology Development LLC	United Kingdom	2013-519640	Aug 20, 2010 Issued
Empire Technology Development LLC	France	2006619	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2011080068667.5	Aug 20, 2010 Issued
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Empire Technology Development LLC	Japan	5584363	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	5557957	Aug 20, 2010 Issued
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Empire Technology Development LLC	United States of America	10-1438536	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	5487363	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2013-519640	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2006619	Aug 20, 2010 Issued
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Empire Technology Development LLC	Japan	2013-524827	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2006619	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	60201034017.1	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2013-519640	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	2006619	Aug 20, 2010 Issued
Empire Technology Development LLC	United States of America	8415668 12/827906	Jul 16, 2010 Issued
Empire Technology Development LLC	United States of America	9345668 12/847571	Jul 16, 2010 Issued
Empire Technology Development LLC	United States of America	9369132 13/795816	Jul 15, 2010 Issued
Empire Technology Development LLC	United States of America	9293591 13/272001	Oct 14, 2011 Issued
Empire Technology Development LLC	United States of America	983135 13/066818	Jan 26, 2015 Issued
Empire Technology Development LLC	United States of America	15/833359	Dec 6, 2017 Published
Empire Technology Development LLC	United States of America	8503350 12/547274	Aug 13, 2008 Issued
Empire Technology Development LLC	United States of America	8508671 12/540843	Aug 13, 2008 Issued
Empire Technology Development LLC	United States of America	8611414 12/707400	Jul 30, 2010 Marked for Impairing
Empire Technology Development LLC	United States of America	10-1534095	Jul 13, 2010 Issued
Empire Technology Development LLC	United States of America	2010080064038.5	Jul 13, 2010 Issued
Empire Technology Development LLC	United States of America	64-38904	Jul 13, 2010 Pending
Empire Technology Development LLC	Japan	2017-253438	Aug 13, 2008 Issued
Empire Technology Development LLC	United States of America	8543686 12/507938	Jul 23, 2009 Issued
Empire Technology Development LLC	United States of America	10-1354013	Jul 23, 2010 Issued
Empire Technology Development LLC	United States of America	5799012	Jul 23, 2010 Issued
Empire Technology Development LLC	Australia	2010275132	Jul 23, 2010 Issued
Empire Technology Development LLC	European Patent Office	108024832	Jul 23, 2010 Issued
Empire Technology Development LLC	United States of America	9008464 12/485692	Jul 16, 2008 Published
Empire Technology Development LLC	United States of America	10-1451237	Jul 15, 2010 Issued
Empire Technology Development LLC	United States of America	5709853	Jul 15, 2010 Issued
Empire Technology Development LLC	United States of America	57755707	Jul 15, 2010 Issued
Empire Technology Development LLC	United States of America	10-1524119	Jul 15, 2013 Issued
Empire Technology Development LLC	United States of America	9082278 12/727961	Dec 13, 2010 Issued
Empire Technology Development LLC	United States of America	5596801	Dec 13, 2010 Pending
Empire Technology Development LLC	Japan	20102535659	Dec 17, 2010 Issued
Empire Technology Development LLC	China	201008005940-1	Dec 17, 2010 Issued
Empire Technology Development LLC	United States of America	8916134 12/71812	Jan 23, 2014 Issued
Empire Technology Development LLC	Republic of Korea	10-1084435	Jul 18, 2008 Issued
Empire Technology Development LLC	United States of America	8295341 12/690911	Oct 30, 2008 Issued
Empire Technology Development LLC	United States of America	829086 12/634251	Dec 9, 2008 Issued
Empire Technology Development LLC	United States of America	8797933 13/018477	Feb 1, 2011 Issued
Empire Technology Development LLC	China	201201280022052.8	May 9, 2012 Issued
Empire Technology Development LLC	China	2L201480026163.5	May 9, 2012 Issued
Empire Technology Development LLC	United States of America	14777282	May 15, 2013 Marked for Impairing
Empire Technology Development LLC	China	2L201510649273.3	Oct 9, 2015 Issued
Empire Technology Development LLC	United States of America	14780492	Oct 7, 2015 Published

PATENT
REEL: 048373 FRAME: 0424

COBB_029515

Washington State University	Empire Technology Development LLC	United States of America	9865870 14/122559	Nov 26, 2013 Issued
Washington State University	Empire Technology Development LLC	European Patent Office	2719003 10/1708291	Jun 2, 2013 Issued
Washington State University	Empire Technology Development LLC	Republic of Korea	2719003 10/2014-7000256	Jun 2, 2013 Issued
Washington State University	Empire Technology Development LLC	France	2719003 60/21034789.9	Jun 2, 2013 Issued
Washington State University	Empire Technology Development LLC	United Kingdom	2719003 12/796057.3	Jun 2, 2013 Issued
Washington State University	Empire Technology Development LLC	United States of America	2719003 12/796057.3	Jun 2, 2013 Issued
Washington State University	Empire Technology Development LLC	United States of America	949385 14/762,691	Jul 22, 2013 Allowed
Washington State University	Empire Technology Development LLC	United States of America	949385 13/757600	Aug 20, 2013 Issued
Washington State University	Empire Technology Development LLC	European Patent Office	2334720 11/752898.7	Feb 11, 2013 Issued
Washington State University	Empire Technology Development LLC	Germany	2334720 60/21104127.9	Feb 11, 2013 Issued
Washington State University	Empire Technology Development LLC	France	2534720 11/752898.7	Feb 11, 2013 Issued
Washington State University	Empire Technology Development LLC	United Kingdom	2534720 11/752898.7	Feb 11, 2013 Issued
Washington State University	Empire Technology Development LLC	China	201180008383.2	Feb 11, 2013 Published
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	5808480 13/636027	Sep 19, 2012 Marked for Impairing
Washington State University Research Foundation	Empire Technology Development LLC	Japan	5808480 2011-50627	May 9, 2012 Issued
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	9614250 14/222017	Mar 24, 2014 Issued
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	9714341 14/778436	Sep 18, 2013 Issued
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	9775347 14/898442	Dec 14, 2015 Issued
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	9724213 14/452867	May 19, 2015 Issued
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	14/761,268	Jul 15, 2015 Marked for Impairing
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	9290524 13/837394	Mar 15, 2013 Issued
Washington State University Research Foundation	Empire Technology Development LLC	United States of America	9588465 14/982,431	Dec 29, 2015 Issued
West Bengal University of Technology	Empire Technology Development LLC	United States of America	8524481 13/321316	Nov 18, 2013 Issued
West Bengal University of Technology	Empire Technology Development LLC	China	2L2010800658487-7	Nov 9, 2010 Issued
West Bengal University of Technology	Empire Technology Development LLC	India	08652KOU/2010	Aug 5, 2010 Published
West Bengal University of Technology	Empire Technology Development LLC	European Patent Office	10853559.0	Nov 9, 2010 Marked for Impairing
West Bengal University of Technology	Empire Technology Development LLC	United States of America	9359584 13/726109	Apr 26, 2011 Issued
West Bengal University of Technology	Empire Technology Development LLC	India	03992KOU/2010	Jun 1, 2010 Published
West Bengal University of Technology	Empire Technology Development LLC	United States of America	13/881,148	Jul 9, 2013 Published
West Bengal University of Technology	Empire Technology Development LLC	United States of America	8388856 13/380767	Dec 23, 2011 Issued
West Bengal University of Technology	Empire Technology Development LLC	Japan	5793617 2014-514157	Jul 28, 2014 Issued
Xian Jiaotong University	Empire Technology Development LLC	India	07829KOU/2011	Jun 10, 2011 Published
Xian Jiaotong University	Empire Technology Development LLC	United States of America	8749120 13/578095	Aug 23, 2012 Issued
Xian Jiaotong University	Empire Technology Development LLC	Republic of Korea	10-1624430 10-2014-308441	Oct 28, 2011 Issued
Xian Jiaotong University	Empire Technology Development LLC	Japan	5938103 2014-5-34908	Oct 28, 2011 Issued
Xian Jiaotong University	Empire Technology Development LLC	United States of America	9034468 13/884,603	May 9, 2013 Issued
Xian Jiaotong University	Empire Technology Development LLC	China	2L201180074122-X	Nov 29, 2011 Issued
Xian Jiaotong University	Empire Technology Development LLC	Japan	5860972 2014-541502	Nov 29, 2011 Issued
Xian Jiaotong University	Empire Technology Development LLC	United States of America	9774004 15/030307	Dec 22, 2014 Marked for Impairing
Xian Jiaotong University	Empire Technology Development LLC	United States of America	15/117,395	Apr 15, 2015 Issued
Xian Jiaotong University	Empire Technology Development LLC	United States of America	15/555,893	Aug 8, 2016 Marked for Impairing
Xian Jiaotong University	Empire Technology Development LLC	China	201580077465-X	Sep 5, 2017 Allowed
Xian Jiaotong University	Empire Technology Development LLC	United States of America	15/308,018	Mar 11, 2018 Published
Xinova Hong Kong Limited	Empire Technology Development LLC	United States of America	14/761,544	Oct 31, 2016 Published
Xinova Hong Kong Limited	Empire Technology Development LLC	United States of America	15/032,331	Jul 16, 2015 Marked for Impairing
Xinova Hong Kong Limited	Empire Technology Development LLC	United States of America	15/112,231	Apr 27, 2016 Marked for Impairing
Xinova Hong Kong Limited	PCT	PCT/CN2016/082173	PCT/CN2016/082176	Jul 13, 2016 Marked for Impairing
Xinova Hong Kong Limited	PCT	PCT/CN2016/082176	May 16, 2016 Marked for Impairing	May 16, 2016 Marked for Impairing